Indo-European Word Formation

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edited by James Clackson
and Birgit Anette Olsen



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Preface

The contents of the present volume issue from the conference *Indo-European Word Formation – Inventory and Analysis*, held at the University of Copenhagen, October 20th ÷ 22nd 2000.

The papers cover a wide variety of subjects within the field of word formation, both nominal and verbal, and the borderland between morphology and syntax. While some continue traditional philological research into corpus languages in order to clarify our understanding of the languages themselves, others are more concerned with typological issues or with the construction of theoretical models of Indo-European with the object of accounting for subsequent changes in the daughter languages. Finally the mainstream Indo-Europeanist outlook is challenged in the papers on Eurphratic and on word formation in Nostratic.

In accordance with the wish of the speakers themselves, the volume does not include the contributions by James Clackson (Cambridge), Michael Fortescue (Copenhagen), Frank Heidermanns (Köln), Alexander Lubotsky (Leiden), Alan Nussbaum (Cornell), Sergei Starostin (Moscow) and Karin Stüber (Zürich), either because the publication of their papers was already earmarked for another forum or because we were introduced to parts of more extensive research projects. However, the lecturers all contributed to the discussion with essential and thought-provoking ideas, and the conference was greatly enriched by their presence.

After an interval of 25 years since the publication of the Regensburger Fachtagung, *Flexion und Wortbildung*, the time seemed to be ripe for another conference where linguists, in particular Indo-Europeanists, sharing an interest in word formation would be able to meet, exchange ideas, present new results and discuss ongoing projects and future plans.

When the idea for the conference was fostered, a growing international interest in Indo-European derivational morpology and compounding had been manifest for some years, and the occupation with these matters had already yielded notable results such as the publication of a number

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Nostratic, Eurasiatic and Indo-European Derivation

FABRICE CAVOTO

Speculations about a common set of derivative markers in the Nostratic proto-language have been offered on several occasions. In particular ILLIČ-SVITYČ's comparative dictionary contains many proposals, and a deeper analysis as well as a few additional points have been made by HEGEDŰS (1992). Additional suggestions have been proposed by GREENBERG in his recent book (2000).

For several reasons which we shall discuss later there is, however, generally a rather strong reluctance against working with such morphemes, or even against accepting them as valid comparisons.

Let us, for now, begin by observing a reconstruction and comparison of this kind.

ILLIČ-SVITYČ (1974:#253) reconstructs a Nostratic derivative suffix **-lV-* which he observes in:

– Kartvelian: **-el- / *-il- / *-l-*: suffix of participles and deverbative nouns: Georgian *c̣er-il* 'writing' (*c̣er-* 'to write'); Megrelian *ḳitx-ir* 'reading' (*ḳitx-* 'to read'). In its full grade form this suffix can also be used in combination with prefixes, as in Megrelian *ma-č̣ar-al* 'writing'. It also has a clear diminutive and hypochoristic function, as in Georgian *mam-il-a* '(dear little) daddy', Svan *mār-ol-* 'little man' (*māre* 'man'). With this same function, it can also be combined, as in Georgian *naʒv-iḳ-al-a* 'little tree'.

– Indo-European: **-l-*: suffix of denominal and deverbal adjectives, as Armenian *-l*, suffix of deverbatives: *sire-l* 'love, to love [inf.]'; Anatolian (denominal and genitival *-l-*, *-la-*): Hittite *atta-lla-* 'of the fathers'. It also forms denominal adjectives as in Latin *humi-li-s* (*humus*) and nomina agentis, as in *legulus* 'fruit gatherer' (*leg-* 'to collect, to gather'), or Old High German *tregil* 'carrier' (*tragan* 'to carry'). The suffix is further used in the formation of participles in Slavic, as in Old Church Slavic *by-lъ* 'been', *nes-lъ* 'carried', etc. HEGEDŰS notes a diminutive function, as e.g. in Gothic *barnilō* 'little child' (*barn*), Latin *rēgulus* 'little king' (*rex*), Greek *παχυλός* 'somewhat fat' (*παχύς*).

– Uralic *-*lA*-, denominative and deverbative suffix, as in Finnish *vete-lä* 'fluid' (*vete* 'water'), Saami *bâste-l* 'sharp, strong' (*bâste-* 'to be strong'), Nenets *sa'-la* 'foolish, meaningless' (*sa'-* 'to be uncontrollable'). GREENBERG (2000: 188) also adds the Selkup participle *-lA*, as in *ity-lä* 'taking', as well as the Kamassian aorist, which is a participle in *-le-* with a person marker, as in *nere-le-m* 'I fear'. A diminutive function is also attested, e.g. Mordva *ašo-la* 'somewhat white' (*ašo* 'white') or in Udmurt *gop-al* 'little grave' etc.

– Altaic *-*l*-: diminutive and deverbative suffix. ILLIČ-SVITYČ cited Turkic, Mongolian and Korean forms, as Mongolian *tani-l* 'knowing, known' (*tani-* 'to know'), *quri-l* 'assembly, gathering' (*quri-* 'to collect'). In Korean, this is the suffix of the future participle. To the data of the dictionary HEGEDŰS adds evidence from Tungusic: *-*la*-, forming deverbal nouns and adjectives, as in Evenki *olgori-lā-n* 'jealous' (*olgori-* 'to be jealous), *soktomo-la* (/*soktomu-la*) 'drunken' (*soktomu-* 'to get drunk'), Nanaj *herke-le* 'strap' (*herke-* 'to fasten') etc. Here again a diminutive function seems to be attested, e.g. Olca *n'ama-lā* 'somewhat warm' (*n'ama* 'warm'), Nanaj *dupsi-lē* 'somewhat dimmed' (*dupsiži* 'dimmed, troubled'). RAMSTEDT (1952-1966/II: 145 and 325) considered this suffix to be borrowed from Mongolian into Tungusic, while HEGEDŰS cites recent studies (BOLDYREV 1987: 57-68) for attempting to prove that it could actually be indigenous in Tungusic too. Whether the suffix is borrowed from Mongolian or not will not be discussed here, and we will limit ourselves to the observation that a diminutive function seems to be attested within Altaic as well.

– Dravidian: ILLIČ-SVITYČ only quoted Malto *-le* which is the marker of the preterite participle (as in *ṭunḍ-le* 'seen'). As is generally the case when a morpheme only seems to be attested in one single branching of a given family, ILLIČ-SVITYČ was cautious and questioned this Dravidian correspondence. However, since ILLIČ-SVITYČ was working on his comparative dictionary, some progres has been made within Dravidian comparative linguistics. ANDRONOV (1978: 384, 392, 397-400; 1994: 347) reconstructs a Proto-Dravidian suffix *-*al* which forms verbal nouns and, as noted by HEGEDŰS as well, the Dravidian infinitive suffix *-*a* and the participial suffix *-*a(n)* could be reflexes of this *-*al*. Within Dravidian, then, one could sum up the original function of this suffix as forming verbal nouns.

– Afro-Asiatic: The suffix forms diminutives in Semitic, as in Arabic *ṭif-l* 'small children' < **ṭap-* (cf. Gə'əz *ṭäf* 'child'), and it is also seen in the function of a noun formant, though rarely, according to MOSCATI e.a. (1980: 82) who only cite a few examples (as Arabic *hidm-il* 'patched garment' from *hidm-*, Hebrew *karm-el* from *kerem-*). In his recent book, EHRET (1995) finds many more examples of this suffix, well-attested in every branching of Afro-Asiatic (except in Omotic), as an attributive and complement deverbative and in nomina agentis, as e.g. Arabic *ṭas-l-* 'running water' (< **-t'as'-* 'to seep'), Egyptian *bʿr-* 'fountain' (**băaç-* 'to flow heavily'), Cushitic: Somali *dagaa-l* 'fight' (**zag/γ-* 'to hit, to strike'), Chadic *tyl* 'sun' (**tâ-* 'to be hot'). There are also some cases of this marker forming deverbative adjectives, as in Arabic *dabīl* 'fat' (**di/up'-* 'to rise, to swell) etc. With a diminutive function, which is apparently only found in Semitic, this suffix is suspected to have been borrowed from Indo-European, but, as noted by GRAY (1971: 47), this is far from certain.

To this material, HEGEDŰS (1992: 37) adds evidence from Yukaghir: *-l-*, which she characterises as a suffix of nomina actionis, qualitatis or quantitatis, providing a few examples of the former function, as *tadi-l* 'giving' (*tad́-* 'to give'), *wue-l* 'doing' (*wie-* 'to do'). GREENBERG (2000: 186-187) also quotes the verbal noun *kelu-l* 'arrival' (*kel-* 'to arrive, to reach'). As there seems to be some convincing evidence that Yukaghir and Uralic are closely related to each other and could form an Uralo-Yukaghir family, as first suspected by COLLINDER (1940), and further defended and illustrated by ANGERE (1956) and SAUVAGEOT (1963, 1969) among others, I will simply add the Yukaghir data to the Uralic ones for this issue.[1]

Finally HEGEDŰS quotes the Eskimo marker *-lyk-*, which she describes as a suffix forming nomina possessoris with attributive-predicative and substantival features, citing examples like Greenlandic *saku-lik* 'having a weapon' (*sako-* 'weapon'). It has been argued by KREINOVIČ (1976: 98-99) among others that this suffix originates from a free morpheme meaning 'to have, to possess', and in FORTESCUE, JACOBSON and KAPLAN (1994: 404) we find a postbase **ləγ-* 'one having/

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[1] A close relationship between Uralic and Yukaghir is still far from being generally accepted by Uralists. The interpretation of the data is rather complex, but it is beyond the scope of the present paper since, as we shall see, it is not crucial for the ideas defended here whether Uralic and Yukaghir are really two members of an Uralo-Yukaghir family or not.

provided with'. The direct connection to the rest of the Nostratic languages is, however, not secured for this suffix, although a genetic connection cannot be excluded. As is well known, this suffix is also commonly suspected to have been borrowed from Turkic (*-lik/-lık*) where it has a similar function.[2]

This suffix alone, for which we have just summed up several of the proposed connections, presents an excellent illustration of the problems encountered in the comparison of such morphemes:

I. The shape:

One of the major problems in the long range comparison of grammatical morphemes is the shape of these markers. As a matter of fact most of them appear to be monosyllabic, and, even worse, they often consist of a simple structure *CV* or *VC*. Since any language has a limited number of phonemes and, consequently, only a limited number of combination possibilities, it has been noted on many occasions that comparing such short sequences dangerously increases the risk of chance resemblance (cf. RINGE 1995, 1998, CAMPBELL 1998). In strict mathematical terms, the shorter a sequence, the fewer the combination possibilities and, consequently, the higher the risk of chance resemblance. This problem applies not only to derivative morphemes, but to most of the other grammatical morphemes as well. It has further been argued that precisely because of this risk, such grammatical morphemes should, at least for now, simply be left out of any long range comparisons.

II. The semantic matches:

The particular suffix **-lV-* constitutes a very clear exemplification of the problem: a given morpheme seems to have several meanings and functions, even within a single language family, and these functions cannot always easily be directly connected with each other[3].

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[2] Here it could, indeed, be a complex suffix containing the derivative **l-* element.

[3] Thus e.g. VINE (1991: 18 ff.; 1998: 87-90) with respect to the Indo-European suffix **-lo-*.

These two specific problems are what make such comparisons difficult and less convincing, and it could easily be argued that under these circumstances anything could too easily be connected with anything.

Moreover, it is worth mentioning that even within a single language family the different formations involving this and other comparable suffixes are not homogenous, and, as noted by VINE (1998: 87-90), the case of e.g. this suffix in Indo-European is rather unclear, because one would have to account for the different types of formations in which it is found.

If it is furthermore added that specific sound rules may also occur for this kind of morphemes because of their position, or we may be dealing with analogical phenomena, it is indeed difficult not to agree, *a priori*, with those who would attack such a comparison.

In a recent study about the pronominal stems of the Nostratic languages (CAVOTO, Forthcoming a), we have attempted to elaborate a method which would avoid such problems. There too, it has been argued that one could not convincingly compare the Nostratic pronominal stems and personal endings because they are too short, which makes the risk of chance resemblance too high.

Let us observe the following set of personal endings:

Singular	1 *-*m*
	2 *-*ṣ*
	3 *-*Ø*
Plural	1 *-*maṣ*
	2 *-*to-k*
	3 *-*p*

This set of pronominal markers, which looks very much like Indo-European or Uralic, is not taken from any Indo-European or Uralic language, nor from any language which could have borrowed it from one of these two families. This example is well known (it is reused by BOISSON in a paper about the problems of the genetic relationship of Sumerian (1992)); the endings are taken from Proto-Eastern Miwok, which is a sub-group of the Utian (Miwok-Costanoan) language family of California where the system is the result of a rather recent evolu-

tion.[4] As we can observe, cases of chance resemblance do occur, also for almost complete sets.

Furthermore it has been argued that borrowings of pronouns and personal markers, even whole sets, though this is rarely the case, cannot be excluded: a well-known case is seen in Copper Island Aleut (indigenous roots and Russian endings).[5] Thus, both the risk of chance resemblance and of borrowing are rooted in reality and not the result of fiction or pessimistic prejudice.

As expressed by RINGE (1995, 1998) and CAMPBELL (1998) among others, one would, at least for the comparison of such morphemes, like to see some suppletion, some recurrence, or some highly characteristic pattern recurring in all the languages we compare, anything for which chance or borrowing could not so easily be argued to be a realistic possibility. Therefore we must try to look for, and possibly find, such patterns.

In my study of the Nostratic personal markers (CAVOTO Forthcoming a) it was possible to show that each person had at least two different markers, used in *suppletion* of each other, and, furthermore, that precisely the same pair of markers is found, again in suppletion or competition with each other, for other functions as well (thus, for example, first person **-m* and **-k*, close demonstrative **m-* and **k-*, and possibly interrogative **m-* and **k-*).

These two patterns, *suppletion* and *recurrence*, can be used as an additional comparative tool. Thus we will no longer be looking for simple, one-to-one correspondences like 'first person **m* in Indo-European = first person **m* in Uralic = first person **m* in Altaic etc.', but for *the pair *m/k* as a first person marker in all those languages. Likewise, basing ourselves on semantics and functions, we will no longer look in the languages we compare for the suppletive pair **m/k* as a first person marker alone, but also for the same pair **m/k* as a close demonstrative and possibly as an interrogative stem.

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[4] The example was first presented by CALLAGHAN (1987), commenting that this set of endings indeed looks *awfully* like Indo-European and Uralic.

[5] One should, however, not forget that such examples are well-known precisely because of their rarity.

Each of these two patterns, a suppletive pair and its recurrence, are, even taken individually, specific enough to give us some degree of safety in our comparisons. But combining these two together and treating them as a unique set of highly specific patterns probably gives us more safety than ever, since where we find them behaving precisely in the same way in these respects, chance resemblance and borrowing of such a complex pattern or system becomes still more unlikely.

I think that the same comparison system may be established at least for some of the derivative morphemes. Thus, looking again at ILLIČ-SVITYČ's suffix **-lV-*, we will use its variety of functions which are apparently common to the compared languages for its characterization and identification. Summarising its most widely attested functions, we obtain the following table:

**-lV-*	Forming verbal nouns or adjectives	Diminutive
Indo-European	X	X
Uralo-Yukaghir	X	X
Altaic	X	X
Kartvelian	X	X
Afro-Asiatic	X	X (Semitic only)
Dravidian	X	

We can thus observe that this marker is recurring for the functional pair 'verbal noun/adjective' and 'diminutive', and this, in itself, already constitutes an additional specific pattern. Of course the complete lack of a marker in a given language family does not automatically exclude it from the macro-family, and we must look at a more global picture: if a language never has any grammatical morpheme in common with another, its inclusion in the family is questionable, even if there are some lexical look-alikes. On the other hand, if a given language systematically leaves out one part of such a pair or set, this can be used in different ways: first, it may help for the question of sub-groupings (and this particular example is suggestive), and secondly, we may be able to use it in an attempt to determine the original function of a particular morpheme at an earlier stage, considering its additional functions

in a given language or larger group of languages as a common innovation.[6]

Following the method discussed above, we should then try to look for, and possibly find, another marker which has at least the same two main functions as the marker **-lV-*. And to the question whether we can indeed find such a marker, the answer actually seems to be positive.

ILLIČ-SVITYČ (1971:#150, #151) reconstructed two morphemes **-jV-*. One of them is used in the formation of denominal and deverbal nouns and adjectives, and some of the examples are:

– Afro-Asiatic **-y-* (all additional examples from EHRET 1995): Semitic: Arabic *saʕ-y* 'endeavour, effort' (< **sâʕ-* 'to do, to accomplish'), M.South Arabian **ḏḥ-y* 'garden' (< **c'aḥ-* 'to dig'); Egyptian *s3r-y* 'needy man' (< **s3r-* 'to need'); Omotic and Cushitic: *malla-y* 'fish' (< **mal(ḥ)-* 'to ooze, to be viscous'); Berber: *etš-i* 'drink' (*etš-* 'to drink').

– Indo-European: **-i̯o-*: denominal and deverbative noun/adjective suffix. The most common function is denominal (both for nouns and verbs), but still there are a few examples of a deverbative function. In his recent book, GREENBERG (2000:167-168) cites a few Brugmannian examples, as Proto-Germanic **luʒʒ-i* and Old Church Slavonic *lъz-ь* 'lie'. Some Sanskrit *i*-stems are deverbative as well, as *dr̥śi-* 'seeing' (*darś-* 'to see'), and furthermore, Vedic uses such *i*-stems in the dative to form infinitives (as for example *yudhaye* from a verbal stem *yudh-* 'to fight'). Another example of this suffix in a deverbative function is Latin *fluv-ius* 'river' (*fluere* 'to flow').

– Uralic: **-jA-/-i-*: suffix of deverbatives and nomina agentis, as in Finnish *osta-ja* 'buyer', Saami *buolle-je*, present participle of *buole-* 'to burn', Mordva *pala-j*, present participle of *pala-* 'to kiss', Nenets *tāle-j* and Kamassian *thol-i* 'thief', both from *tāle-* and *thol-* respectively 'to steal'.

– Dravidian: *-i*, suffix of indeclinable (simultaneous) participles, as Tamil *nīṅk-i* 'interrupting', Telugu *koṭṭ-i* 'slaying'.

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[6] MICHALOVE (2002) proposes something very similar about the accusative ending **-m(A)* in Altaic, Uralic and Indo-European.

– Altaic: Turkic *-i/y*: deverbative suffix, as in Old Turk *qonš-y* 'neighbour, comrade' (*qonuš-* 'to live together'); Mongolian *-i*: present-future participle, as *odu-i* 'going'; Korean *-i/i̯*: suffix of deverbative nouns, as in *čab-i* 'haft, shaft, helve' (*čab-* 'to take, to seize'), *ti̯ri̯* 'entrance' (< *ti̯r-* 'to enter').

These derivative functions are very similar to those of the suffix *-*lV*-, and as the denominative function is mainly seen in Indo-European only, the deverbative one could be argued to be the original, although it is old in Indo-European itself.

In order to obtain a full '*pair of alternating pairs*', we must see whether this morpheme also has a diminutive function, and such a function, with an endearing nuance, is actually found for this suffix as well:

– Afro-Asiatic: *-*(a)j*-: as in Arabic *'ub-aj* '(dear little) daddy', Tigre *källēb-āj* 'puppy', Cushitic Galla *ilmā-jo* 'little child'.

– Kartvelian: *-*ia*, as in Georgian *ʒam-ia* 'little brother', Megrelian *baba-ia* 'little father', etc.

– Uralic: *-*j*, as in Finnish (dialectal) *emo-j* 'little mother', Carelian *tatto-ja-ni* 'my little father', Mansi *šan-i-m* 'my little mother', etc.

– Altaic: *-*j*, as in Tuvin *ava-j* 'little mother', Baškir *ata-j* 'little father', Evenki *kakā-j* 'little brother'.

– Indo-European: not many examples with a clear diminutive meaning. However, ILLIČ-SVITYČ (ibid.) cites Greek παιδίον from παιδ- 'child', Latin *senec-i-ō* 'little old one'.

We must furthermore notice that Kartvelian, Uralic and Altaic seem to share the same restriction tendency in the use of this suffix, mainly seen in direct address.

What is generally proposed here is that whether these suffixes, **jV* and **lV*, with their different functions originally had both meanings, or whether there were originally two suffixes **jV* and **lV*, each with its own function, which came to look alike or almost alike, or whether one of the functions for a given suffix is analogically influ-

enced by the other suffix (as ILLIČ-SVITYČ himself seemed to believe) does not matter much for our issue, because whatever happened, or whatever 'accident' is the cause of the present situation, the point is that this kind of 'accident' is more likely to happen one single time in a given (proto-)language than six or seven different times in different languages. Thus, as this 'accidental pattern' is likely to have been present in a given language at a given time, the very same 'accident' is much less likely to have taken place in the same way, and with precisely the same elements, in so many different languages individually. Whatever happened in the Proto-Nostratic language to cause this pattern, it will perhaps be discovered by internal reconstructions of Proto-Nostratic, or even in further connections with other macro-families (a possibility which cannot be excluded, and which, from a logical point of view, would be the most likely), and thus this question is not under discussion here. And likewise, whether **jV* and **lV* came to share the same or related functions by accident or analogy, or whether this is the original state of affairs, it is a matter of fact that, once again, the same accident is not likely to have taken place independently in so many different languages. Combining both features, any explanation other than the one based on a direct genetic relationship becomes even more unlikely.

We may summarise as follows: from suffixes which are said to be too short and too vague to be compared effectively, we can establish this complex set of features for each of them:

	Pair*l/jV deverb.	Pair *l/jV dimin.	Pair deverb./ dimin. *lV	Pair deverb./ dimin. *jV	Total
Indo-Eur.	X	X (?)	X	X	3 or 4/4
Uralic	X	X	X	X	4/4
Altaic	X	X	X	X	4/4
Dravidian	X	/	/	/	1/4
Kartvelian	/	X	X	/	2/4
Afro-As.	X	X (?)	X (?)	X	2,3 or 4/4

As we have tried to demonstrate, the degree of safety allowed by such comparisons is highly increased. Furthermore, similar *functional pairs of formal pairs* can be established for many other grammatical morphemes, some of which provide very interesting discussions, as the **-t* 'plural/ collective' vs. 'abstract' vs. **-(V)p/b(V)* 'id.', involving the formation of feminines in Indo-European and Afro-Asiatic, denoting,

beyond the pairs, also a common perception of plurality/collectivity which would point in the direction that most plural markers are old abstract formations (cf. CAVOTO, Forthcoming b).

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A New Etymology for Latin *aquila*[1]

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1. Introduction

Heretofore, there has been no universally accepted etymology for Latin *aquila* 'eagle'. There is, however, one tradition in the literature that relates *aquila* to *aqua* 'water', typically via a roundabout connection with a transferred meaning of 'dark'. Thus, for example, POKORNY (1994: 23) derives Lat. *aquilus* 'dark' and *Aquilō* 'the North Wind' (i.e., 'the one that darkens the sky') from *aqua*; he goes on to derive *aquila* from *aquilus*, via a meaning of 'the dark-colored one'. Similarly WALDE (1965: 60-61) references *aquilus* at his entries for *aquila* and *aquilō*, and *aqua* at *aquilus*.

Another tradition is exemplified by ERNOUT & MEILLET (1994), who take no position on the relationship of *aqua* to *aquila*, *aquilus*, and *Aquilō*. They do, however, rather diffidently suggest *aquilus* as the etymon for *aquila* and *Aquilō*, though without attempting to give a source for *aquilus*'s meaning.

Yet another tradition associates *aquila* with **aku*- 'swift'. TUCKER (1976: 21-22) covers all these bases – and a few more – at his entry for *aquila* (quoted here *in toto*):

> "eagle (commonly taken as the dark or brown bird, *μελανάετος*); **aquilus**: 'subfuscus et subniger' (Paul. Fest.). Some compare Lit. *ãklas*, Lett. *akls* (blind) , which are < ***aq-** bind, make close or compact (cf. *caecus*: v. under *ăcer*). It is quite probable that the sense 'dark', like that of 'blind', is so derived, since all such terms of darkness are expressive of making thick,

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[1] I owe the utmost gratitude to Fabrice Cavoto and Alexis Manaster Ramer for the generosity with which they shared their ideas and for their unflagging encouragement. I would also like to thank Philip Baldi, Birgit Anette Olsen, Theo Vennemann, and Benji Wald for their very helpful comments, suggestions, and clarifications, and I am especially grateful to Elizabeth Ann Ciccone and Jennifer Pacilli, who suggested and located the great majority of the mythological references. I also thank the participants in the *Indo-European Word Formation, Inventory and Analysis Conference* in Copenhagen in October 2000 – in particular, George Dunkel, Michael Meier-Brügger, Alan Nussbaum, Christiane Schäfer, and Brent Vine – for their suggestions.

covering close, binding, & the like [e.g. E. *dark* (< **dher-g-*), *τυφλός* (< **dheu-bh-*): v. *tenebrae*, *caecus* (which, like *τυφλός*, = both 'dark' & 'blind'). So Sk. *aktú-* (dark, night), which is commonly taken, in defiance of the sense, with ἀκτίς (ray of the sun); but v. **nox**]. Hence *aquilus* = of the colour of darkness. The root is then not **aqw-*, but **aq-*; Cf. ἄκαρος· τυφλός (Hesych.). The Lat. represents **aq-w-i-* = closing, binding (v. *acia*). Meanwhile, however, it is not certain that **aquila** is simply the fem. of *aquilus* as the 'dark-coloured' bird, the term being hardly specific enough. The name may be distinct from *aquilus* & related to **ac-w-i-* of *aquipedius*, as = swift: cf. *aqua*, &, for the sense, O.H.G. *aro*, O.E. *ear*, E. †*ærne* (eagle) with **eren* 'run', †*arne* (also = run, flow), & *αἰετός* with the prim. sense of *avis*." [emphasis via underlining; mine]

I agree completely with the portion of Tucker's discussion that I have underlined. In particular, I believe that

- the 'dark-colored' one is not nearly specific enough;
- the 'swift' root is in fact what begins *aquila* (and, quite possibly, *aqua*[2]).

However, I find altogether unconvincing Tucker's further attempt to make a connection with something that would transfer the meaning of 'bird' or 'flying' to his etymology, since nothing else in the entry for *aquila* does so. His proposal fails because there is little reason to believe that *ærne* (> Mn.E. *erne*) and *run* derive from a single etymon,[3] or that *αἰετός* (though undoubtedly cognate with *avis*) has anything to do with **ac-w-i-*. Nevertheless, Tucker's intuition that there must be a connection to 'bird' or the like is, I believe, sound.

I will propose an etymology below for *aquila* that in fact incorporates the etymon of *avis*, and is parallel to a generally recognized Latin etymology for a group of birds that are in the same zoological family as the eagles, namely that of *accipiter* 'hawk, falcon'. I will go on from there to propose direct derivations for *aquilus* and *Aquilō*.

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[2] The etymology of *aqua* – indeed its very Indo-Europeanness – is controversial and beyond the scope of the present paper.

[3] Both POKORNY (1994: 326, 325 resp.) and WATKINS (2000: 60, 71 resp.), to name just two sources, give separate etyma for these items.

2. Latin *accipiter* and the proposed etymology for *aquila*

Latin *accipiter* is normally etymologized as the reflex of an earlier compound reshaped by folk etymology. This position is taken by, e.g., ERNOUT & MEILLET (1994: 5):

> "Rapproché par étymologie populaire de *accipiō* .... Si l'on fait abstraction de l'influence de *accipiō*, le mot *accipiter* est parallèle à *acupedius* .... De même que *acu-pedius* rappelle gr. *ὠκύ-πους*, *accipiter* rappelle gr. *ὠκύ-πτερος* (cf. Il. 13, 62), skr. *āçu-patvan-* "qui vole rapidement". L'*ō* qui se trouve dans gr. *ὠκύς*, etc., est conservé dans lat. *ōcior* .... La forme lat. *acu-* aurait le vocalisme zéro du type gr. *βαρύς*, etc.; le *ō* de lat. *ōcior* représente un degré plein, normal au comparatif ..."

and by WALDE (1965: 6) who writes:

> "... wohl aus **acŭ-peter* 'schnellfliegend' (mit *cc* durch volksetym. Anlehnung an *accipere*...)"

The IE root for the first member of the compound is reconstructed by, e.g., POKORNY (1994: 775) as **ōk'u-s*. I would update the representation, a bit apprehensively, to **eh$_3$k'u-*[4] (~ *h$_3$ek'w-*).

I posit that *aquila* is, in origin, a compound of essentially the same type as *accipiter* – or, more accurately, **acupeter*. That is, I propose to derive it from the roots underlying Latin *acu-* 'swift' and *avi-s* 'bird'. Thus it would be the reflex of **h$_3$ek'w-* + (zero-grade) **h$_{2/3}$wi-*[5] (+ **-l-* [diminutive suffix] + **eh$_2$* [feminine suffix]).[6] This in zero-grade

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[4] I am not convinced that this is the correct laryngeal interpretation, but the whole problem of apparent long vowels of this sort in PIE (to which I have seen no satisfactory solution) is beyond the scope of this paper. For present purposes, it suffices that, as everyone would agree, the Greek and Latin variant root forms *o:k-* and *ak-* are related.

[5] There is no general agreement about whether the laryngeal that begins this root is *h$_2$* or *h$_3$*; however, for the present discussion the point is moot, since *avis* in fact begins with *a*, whatever the source of this vowel may be (cf. fn. 7, below).

[6] There is room for another interpretation here, since there are some examples of contamination between *acu-* 'swift' and the originally unrelated root **h$_2$ak-* > *ac-* 'sharp' (as in *acer* 'sharp', *aciēs* 'keenness', *acuō* 'sharpen'). The latter root has a combining form *aqui-*, which might have had an influence on the generation of *aquila*. Still, the semantics of 'swift' would appear to be a decisive criterion.

would give **aku-(a)wilā*,[7] with the **ā* being shortened in final position to *a* by a general Latin rule. This derivation has the important benefit of explaining why the form for 'eagle' should be feminine: it is feminine because the head of the compound, *avi-s*, is feminine.[8]

It is noteworthy that derivation of the names of birds from adjectives referring to their speed is a commonplace; one need look no further than English *swift*.[9]

Two aspects of this etymology – one semantic, one phonological – require amplification: the presence of the diminutive suffix **-l-* in what is obviously not a small bird and the transition from /kuwi/ to /kwi/.

• **The "diminutive" *-l-**

There are several points to be made here:

○ What is commonly termed "diminutive" is in many languages not restricted to small items or young animals. Thus, e.g., there

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[7] The standard position is that the presence of the initial *a* in *avis* is anomalous, since the zero-grade laryngeal would be expected to disappear without a trace in Latin (cf., e.g., Skt., Av. *vi-*). In any case, one has no way of knowing whether this /a/ would appear in the compound – thus the notation indicating its possible absence. For discusssion of (and differing positions on) the IE and pre-Latin form of the 'bird' root, including the identity of its initial laryngeal, see SCHINDLER (1969), SCHRIJVER (1991: 30), and OLSEN (1992).

[8] It seems to be the case in Latin that if there is an overt baseform for an item, a derived diminutive inherits its gender. Thus we have, e.g., *porcus* and *porculus*, *piscis* and *pisciculus* (masc.); *rota* and *rotula*, *avis* and *aucella* (fem.) (cf. fn. 12, below); *caput* and *capitulum*, *flagrum* and *flagellum* (neut.). The unmarked gender for animal names, including those of birds, seems (unsurprisingly) to be masculine, as in, e.g., *corvus* 'raven', *milvus* 'kite', *pavō* 'peacock', though there are some (e.g. *hirundō* 'swallow') of feminine gender, almost certainly because their phonological structure fits the pattern of Latin feminines. However, there is no apparent reason – other than the presence of the root of the feminine-gender *avis* in the form, as posited herein – for Latin to have *aquila*, rather than *aquilus*, for 'eagle'.

[9] The term refers to any member of the *Apodidae*, a family related to the goatsuckers and hummingbirds and notable for rapid flight. Examples include the *chimney swift* (*Chaetura pelagica*) of the Americas and the *swiftlet* (*Collocalia inexpectata*) of eastern Asia.

is Mn.Gk. λαβράκι 'sea bass' and, notably, γεράκι 'falcon'[10] with the -άκι suffix, which is the normal and most productive marker for generating neuter diminutive/hypocoristic nouns; there are no related Mn.Gk. forms without this suffix.[11]

○ In many cases what was earlier a diminutive becomes the term for a standard-sized item or adult animal. Even restricting oneself to words meaning 'bird', two examples immediately come to mind:

• Fr. *oiseau*, It. *uccello* 'bird' < Lat. **aucellus*[12] 'little bird' (with, I would argue, the same *-l-* that is under discussion), and

• Mn.E. *bird* < ME *byrd*, *bryd*, *bird*, etc. 'young bird, bird' < OE *brid(d)* 'young bird'.

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[10] I am grateful to Alexis Dimitriadis for suggesting these examples (April 5, 2000; personal communication in response to a query I posted on the LINGUIST LIST) and for his comments and the sharing of his native-speaker intuitions about various Mn.Gk. forms. I also thank Maria Sifianou for referring me (April 5, 2000; personal communication in response to the same query) to her paper on the pragmatics of Mn.Gk. diminutives (SIFIANOU [1992]). And I thank Lazaros Polymenakos and Gerasimos Potamianos for their native-speaker input on the status and acceptability of various Mn.Gk. forms.

[11] It must be conceded that forms like λαβράκι and γεράκι are neither fish nor fowl, so to speak, insofar as their status as diminutives is concerned. They seem to be felt by some speakers as diminutives morphologically, but not semantically. It should be noted that multiple diminutivization is possible in Mn. Gk. Thus, SIFIANOU (1992: 157) gives the example of "*mama* 'mother' *mamaka - mamakula - mamakulitsa*".

And JOSEPH and PHILIPPAKI-WARBURTON (1987: 217) write:

"Occasionally, double diminutives are possible, e.g. *káro* 'cart' / *karótsa* 'part of a larger cart; (more specialised: 'bed of a lorry')' (i.e. *káro* + *-itsa*) / *karotsáki* (i.e. *karótsa* + *-áki*) '(baby's) stroller', though this is most common with hypocoristics, where one formal diminutive has lost its full diminutive force; for example, the name *θεοδóra* forms a hypocoristic *θεοδorúla*, which can be truncated to *rúla*, and this can then serve as the stem for a further diminutive *rulítsa*."

And it turns out that it is possible to add the diminutive suffix -άκι to λαβράκι and γεράκι, yielding λαβρακάκι and γερακάκι. While these are felt to be a bit strange or to be characterisitic of babytalk, they are far better than, e.g., **παιδακάκι (< παιδάκι 'little child' + -άκι), which is completely unacceptable.

[12] The feminine forms *avicella*, *aucella* are attested.

o Even if the *-l-* is deemed not to be a diminutive, what appears to be the same suffix shows up in the Baltic and Slavic words for 'eagle' (cognate with Mn.E. *erne*, O.Ir. *irar*, Gk. ὄρνις, etc.). Thus there are, e.g., Lith. *arẽlis*, *erẽlis*, OCS *orьlъ*.

o What may well be the same formative is found in Mn.En. *fowl*, G. *Vogel* 'bird' < a dissimilated form having an /l/ as its second consonant (Gmc. **flug-la-*; cf. OHG *fliogan* 'to fly' etc.).

o German *Dohle*[13] '(jack)daw (*Corvus monedula*)' may exhibit the *-l-* of the present discussion, but there are two points that make the relevance of the form unclear:

• It is not certain that the word is Indo-European, since it occurs only in Germanic and Italian – and the Italian forms appear to be borrowed from Germanic.

• As can be seen from the following etymology for *daw* given by the *Oxford English Dictionary* (1989: s.v.), many of the Germanic cognates do not show an /l/:

"Known only from the 15th c. (so the compound *ca-daw*, CADDOW): its form points to an OE. **dawe* (:*-dawā·* from *dagwā·*), in ablaut relation to OHG. *tâha*, MHG. *tâhe* (Gothic type **dêhwô*, OTeut. *dæhwâ* : *-dē·hwā*). Mod. HG. dialects have *dähi*, *däche*, *dacha*; MHG shows a dim. form *tâhele* (OHG **tâhala*), mod.G. *dahle*, since 18th c. *dohle*; whence med.L. *tacula*, It. *taccola*"

Still, even if the word was borrowed into Germanic from a non-Indo-European source, it may have been borrowed early enough that the /l/ in German *Dohle*, Italian *taccola*, etc. qualifies as an example of the *-l-* under discussion – whether it be a diminutive suffix, a "bird" suffix, or something else. In this regard, it should be noted that jackdaws are not particularly small birds, being about 33 cm. long.

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[13] I thank Theo Vennemann, who suggested that it was possible that the *-l-* suffix might be associated with the meaning 'bird' and that I investigate *Dohle*.

○ Greek αἰσάλων 'merlin; a kind of hawk or falcon, probably *Falco aesalon*'[14] may exhibit yet another example of this *-l-* suffix.[15]

• Reduction to /-kwi-/

There are two plausible ways to arrive at this sequence, attested in *aquila*, since one cannot be certain whether the combining form of the 'bird' root was /awi/ or /wi/:

○ /aku/ + /awi/ > /aku/ + /iwi/ (by a copiously attested Latin phonological rule of vowel reduction in combination) > [akwiwi] (by a Latin rule of syllabification) > [akwi] (by haplology)

○ /aku/ + /wi/ > [akwi] (by a phonological rule I would hereby be proposing)[16]

It is interesting to note that **acupeter* was apparently opaque to the Classical Latin speaker, since it was re-formed to the transparent (though rather less perspicuous) *accipiter*. Likewise, *aquila* was undoubtedly opaque as well, since until now no complete, viable etymology has been put forth.

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[14] Cf. THOMPSON (1966: 30, s.v.) for a discussion of the exact referent of the Greek word.

[15] It has been suggested that this word was borrowed from Thracian (see KRAUSE [1942: 214]), but the same *-l-* suffix may nonetheless be involved.

[16] This rule has, in fact, been proposed before, as one of the instantiations of the converse of Sievers' Law (sometimes called Edgerton's Converse). (See SIHLER [1995: 176-177] for discussion.) Whether one believes in strong or weak versions of Sievers'/Edgerton's Law/Converse (and indeed whether such a Law/Converse is applicable in [Pre-]Latin) is not crucial to the present argument, however. It suffices to note that there are apparently no (other) instances of *-u(+)wi- in Latin, and so one is free to posit this rule, which in any case is completely unsurprising phonetically. (At first glance, it would appear that *monuī* 'I warned' is relevant, since it derives directly from **monuwī*; but this must go back to **moniwai* [cf. the participle, *monitus*].) The *-u-* + *-w-* given as an alternative here would have merged to *-w-* at an earlier stage. Moreover, the presumption is that the laryngeal preceding the *w* had been lost by the time of univerbation and thus was not available to lengthen the *u* of *aku-*.

3. *aquilus*

The received position, to the degree that there is any agreement, is that *aquilus* is either

a) directly derived from *aqua*, and thus the meaning 'dark' arises out of the fact that water is (sometimes) dark; or

b) based on **ak-* 'bind, make close' (cf. TUCKER's entry for *aquila*, cited in **Section 1** above).

While these (especially the first) probably had some supportive folk-etymological role in Latin, I propose a third solution, which I believe to be far more cogent:

• *aquilus* 'dark' is based on *aquila* – i.e., it originally meant 'eagle-colored'.

Here I am in partial accord with ERNOUT & MEILLET (1994: 42, s.v. *aquilus*), although they arrive at the opposite conclusion:

> "Les anciens le [i.e., *aquilus*] rapprochent de *aquila* et en font un dérivé de *aqua* (d'après *nūbilus*, *nūbēs*) ... L'explication par *aqua* rend mal compte du sens d'adjectif; on ne voit pas pourquoi l'eau aurait été prise pour désigner une couleur tirant sur le noir (Plaute applique *aquilus* à une négresse). Peut-être à rattacher à *aquila*, l'aigle étant l'oiseau sombre, αἰετοῦ ... μέλανος. Il. Φ 252. Les adjectifs désignant la couleur sont souvent empruntés à des noms d'animaux, et réciproquement ceux-ci peuvent être désignés par le nom de leur couleur, cf. *columba*."

I agree completely that *aqua* accounts poorly for the meaning of *aquilus*, but I posit that the color is named for the bird and not the other way around. In fact, it seems evident that ERNOUT & MEILLET opt for their stated position just because it affords them a source for *aquila* – albeit an unconvincing one.

4. *Aquilō*

I propose that

• *Aquilō*, rather than being 'the dark [or 'eagle-colored'] one', is merely *aquila* personified.

Here I am in close agreement with ERNOUT & MEILLET (1994) – and with Roman authors. At the entry for *aquilō* (p. 42), ERNOUT & MEILLET write:

> "On voit par Festus que les anciens rattachent *aquilō* à *aquila* et non à *aquilus* comme le font les modernes. Ce sont les anciens qui ont probablement raison; *aquilō* n'est pas le vent sombre; il est qualifié de *clārus* par Vg. G. 1, 460, par opposition à *nigerrimus auster* ..."

And there is a good deal of other evidence supporting this position. First of all, the masculine gender of the word is explained by the fact that all (personified) winds in Latin are masculine[17] – presumably representative of the fact that all Greek and Roman wind gods are males. Furthermore, Aquilō was typically equated with a Greek counterpart, Boreās,[18] and Boreās, as GRAVES (1966: 209) points out in a discussion of a Celtic poem, is associated with a kite, a bird closely related to the hawk:

> "The hawk, if not the royal hawk of the Egyptian Horus, will have been the kite sacred to Boreas the North Wind; in Greek legend his Thracian sons Calaïs and Zetes wore kite-feathers in his honour and had the power of transforming themselves into kites. These two birds are mythologically linked in the Egyptean hieroglyph for the North Wind, which is a hawk ...."

It is noteworthy that Aquilō is the *North* Wind, and thus a cold wind that aggressively assaults. Moreover, the personification of a cold, biting wind as a fast, aggressive avian raptor is found in other languages as well; for example, in African-American Vernacular English, the bitter wind that blows into Chicago from Lake Michigan is known as *The Hawk*.

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[17] See, e.g., GIVE (1986: 16).

[18] See, e.g., HAMILTON (1969: 43), BULLFINCH (1964: 127), and especially ERNOUT & MEILLET (1994: *loc. cit.*) quoting St. Isidore of Seville, in turn citing Suetonius.

5. Conclusions

I have posited a new etymology for *aquila*, parallel to a generally accepted one for *accipiter*. That etymology, in turn, gives new insights into the phonological, morphological, and semantic derivations of *aquilus* and *Aquilō*. These items, which formerly seemed at most loosely connected, can now be seen to form a mutually supportive etymological group.

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The deictic origin of the Greek κα-aorist and κα-perfect

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1a. The Homeric κα-aorists and κα-perfects are morphologically remarkably similar even aside from the near-identity of their "alpha-thematic" endings -α -ας -ε -αμεν -ατε -αν/-ασι.[1] Most striking is the original limitation of the characteristic -κα- to the singular active of roots in long vowels (ἔθηκα ἔθεσαν, βέβηκα βεβάᾱσι) in both formations. Both also agree in generalising this -κα- first into the third plural, where -καν and -κᾱσι have already begun to compete with -σαν and -ᾱσι[2] - themselves in turn replacements of earlier -ν, -(h)αν[3] and -ἄσι.

1b. In both κα-formations an ablaut-boundary separates the singular active from all else just as is the case in athematic presents and perfects; thus ἔθηκα : ἔθεμεν and ἕστηκα : ἕσταμεν pattern like ἔφην : ἔφαμεν and οἶδα : ἴδμεν.

A differing type of ablaut is found in the Greek root-aorist: here the entire active is full-grade, as in ἔβην : ἔβημεν (on the third

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[1] Oldest were first singular -α (from *-m̥ or *-h_2e) and third plural -α+ν from *-n̥t in s- and root aorists like ἔχεα. In the third plural perfect, -ασι from *-n̥ti has replaced earlier *-αρ (cf. Vedic *vidúr*); a second plural *-α < *-h_2e (cf. Vedic *vidá*) may also have played a supporting role, as well as the first plural in *-$h_2$me suggested by Latin *vēn-imus*, Gothic *qem-um*, Vedic *sed-ima* and Greek οἴδ-αμεν. The mark *h_2 thus occurs in all persons of the perfect but the third.

[2] Homer (*Iliad* and *Odyssey* together) has ἔθεσαν 34x, ἔθηκαν 11x (ἔθεν in Hesiod); ἔδοσαν 26x, ἔδωκαν 6x (ἔδον in Hesiod); ἕσαν 6x, ἧκαν once (SOMMER 1977:248). For Herodotus (not in SOMMER, 1977:246), the figures (including compounded forms) are: ἔθεσαν 12x, ἔθηκαν 9x; ἔδοσαν 36x, ἔδωκαν 5x; ἕσαν, ἧκαν never. For the perfect, typical Homeric frequencies are ἑστᾶσι 8x, ἑστήκασι once; τεθνᾶσι 4x, τεθνήκασι once. All statistics in this article are based on the TLG CD-ROM, searched with Pandora 2.5.2.

Outside the third plural the only non-singular κα-aorist active in Homer is the hapax first plural ἐνήκαμεν (SOMMER 1977:246), the only mediopassive (normally κα-less, as in Mycenean *ap-e-e-ke* : *e-e-to*) is θήκατο (twice in the Iliad: SOMMER 1977:242, 245). Other first and second plural forms in SOMMER 1977:246-8; on Herodotus see footnotes 15 and 16.

[3] On -(h)αν and -σαν see E. RISCH in *Serta Indogermanica* (Festschrift Günter Neumann, ed. J. TISCHLER, 1982) 330ff., on -καν see SOMMER 1977:248-60.

plural, irrelevant for present purposes, see footnote 9). This pattern is shared by the Greek intransitive aorists in -η- and -θη- and the Vedic root-aorist (*agāt agāma*), *s*-aorist and athematic optative; it has also been traced in the preterite of Old Hittite (see below). Despite such credentials, this agreement is generally seen as a deviation from an earlier system of morphologically parallel presents and preterites distinguished only by their endings and the augment, both with full-grade limited to the singular active. ἔβημεν and *agāma* are consequently taken as due to parallel analogical generalisations from the singular rather than as archaisms.[4]

This consensus was questioned by K. HOFFMANN,[5] who conversely saw forms like ἔθεμεν and βάτην (8 times in Homer, as opposed to βήτην 13 times)[6] as analogic to the κα-perfect.[7] His proposal to take the contrast between the "aoristic" boundary separating the voices and the one seen in presents and perfects as reflecting static versus mobile accent and ablaut has found may followers[8] since it offers the considerable advantage of rationalising the co-existence of both ablaut-patterns within one system.

HOFFMANN's analysis received powerful support from G. HART's demonstration that the Old Hittite preterite had full-grades in the plural (e.g. *ed- ek- eku- epp- šeš-uen*), where the corresponding presents had zero-grades (e.g. *ad- ak- aku- app- šaš-ueni*).[9] Seeing the traditional

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[4] Most recently by HARÐARSON 1993:58, 150-4 and *passim* (without consideration of the Hittite evidence).

[5] *IIJ* 4 (1960) 119 = 1975:146; see there also pp. 247, 361 (1952!), 365, 474.

[6] See E. FRANCIS, *Glotta* 52 (1974), 26f.; H. RIX 1976:214; HARÐARSON 1993:151 (βάτην to βάσκω from *g^wm̥- rather than to ἔβη).

[7] K. HOFFMANN 1975:249 fn. 13, so already BRUGMANN-THUMB 1913:381 fn. The absence of κα-perfects from Mycenaean while the κα-aorist is already well established there (footnote 32) is only *ex silentio*.

[8] E.g. K. STRUNK in *Grammatische Kategorien* (ed. B. SCHLERATH 1985) 500 ff.

[9] *Anatolian Studies* 30 (1980) 51-60. Like the Vedic *s*-aorist, the Old Hittite preterite has the strong stem in the third plural as well, cf. *eku- epp- eš- kuen- šešer* with *aku- app- aš- kun- šaš-anzi*. The other Vedic formations have the weak stem in the third plural, while Greek ἔβαν could continue either **e-g^wh_2-ént* or **e-g^weh_2-ént* shortened by Osthoff's Law. Structurally, the oddly isolated zero-grade in the third plural is hard to explain as an innovation.

assumption of levelling in the preterite but not in the present as arbitrary (58f.), she argued that, on the contrary, while standard IE imperfects can well have been remade after their corresponding presents,[10] root-aorists had no such model and might therefore preserve something earlier. Her conclusion was that the oldest system was "assymetrical", i.e. that preterites had originally ablauted differently from presents. The parallelism of present and imperfect was for her a common innovation of IE proper (or Late IE) after the separation of Anatolian.

Whether we ultimately explain the different ablaut-types as static/mobile or as preterital/presential, the present proposal concerns only the singular, where the sole controversy involves the origin of the -κ-.

1c. The two κα-formations are remarkably complementarily distributed among roots in Homer, the κα-aorist being formed at all only by *τίθημι δίδωμι* and *ἵημι*,[11] while these roots do not form a single κα-perfect.[12] It thus follows that in Homer, no root with a κα-perfect also has a κα-aorist. In Attic, however, *τέθηκα* stands beside *ἔθηκα*, *δέδωκα* beside *ἔδωκα*, and *εἷκα* beside *ἧκα*.

Together, the identical distribution of -κα within the Homeric aorist and perfect paradigms and the complementaary distribution of these two formations between roots in Homer would in good method

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[10] Conversely, the remaking of presents after their imperfects could account for such seemingly "non-ablauting" Vedic roots such as *ad-*, *ani-*, *pā-* "protect", *yā-* "ride", *vami-* and similar; the unexpected full-grades in Rgvedic *hanmas*, *jahāma* (beside AV *jahimas*) and *ajuhavur* might also be old.

[11] If Proto-Greek **h-* is indeed the regular reflex of IE **Hi̯-* (while IE **i̯-* gave Proto-Greek **di̯-*), then this root's initial laryngeal (M. PETERS, *Die Sprache* 22 (1976) 57-61) could be identified as **h₂-* if the **ai̯k/ik-* underlying *αἰχμή*, Cypr. *i-ki-ma-me-no-se*, Latin *īcō* and so on (M. PETERS, *Untersuchungen zur Vertretung der idg. Laryngale im Gr.* (1980) 108f.) is related; for the semantics cf. *ἔβαλον* "hit" : *βάλλω* "throw". **ai̯k-* would continue **h₂ei̯+k-* and **i̯ē-* would continue **h₂i̯-+eh₁-*; the seeming contamination **i̯ēk-* is uncertain if the comparison *ἧκα* - *iēcī* is invalid (§10 end).

[12] A situation that H. OSTHOFF considered, implausibly, to be "zufällig" (1884:372). *τέθηκε* appears first in Hesiod, then Euripides; the mediopassive first in Aeschylus. *δέδωκε* is first found in Hesiod, then Tyrtaeus; the mediopassive in Myc. *de-do-me-na*, then the Homeric hapax *δέδοται* (this being the only perfect attested of any of these three roots in Homer). *εἷκε* occurs first in Sophocles; the mediopassive in Myc. *e-e-to*, then once in Hesiod.

imply that both categories have arisen from the same source (S. KIMBALL 1991:144).

2a. The differences between the two formations in -κα also suggest the relative youth of the κα-perfect. Whereas in the aorist the full/zero-grade root-allomorphs θη/θε, δω/δο etc. correspond to IE expectations whatever we may think of their distribution, the Homeric κα-perfects lack any trace of the *o*-grade which is to be expected in the singular of an IE perfect indicative: βέβηκε ἕστηκε τέθνηκε τέθηκε and so on.[13]

2b. The suffix -κα was greatly productive in the perfect but, as we have seen, not at all in the aorist. -κα- also spread through the active[14] earlier in the perfect. The appearance of -κα- in the first and second plural in Herodotus[15] ended the characteristic distributional restriction to the singular and third plural active which had remained stable from Mycenean to Homer. In the aorist the only first or second plural attested at all is παρεδώκαμεν 5.91.2 (cf. Homeric ἐνήκαμεν); this mitigates the total absence of κα-less plurals like ἔθεμεν.[16]

The perfect active participle in -κώς is already productive in Homer (βεβρω-κώς,[17] ἀδη-κώς), whereas in the aorist no active κα-participle such as "θηκάς, θηκάντος" was ever built, leaving θείς and δούς like βάς and στάς; θηκάμενος for θέμενος is not found until Theognis and Pindar. Thus the perfect seems expansive, the aorist recessive.

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[13] Homeric παρῴχηκεν is from οἴχομαι, μέμβλωκε and βεβρωκώς are from roots in final *-h_3, and δείδοικα is a freshened-up *δέδϝοια.

[14] -κα never made any inroad at all into the perfect mediopassive, cf. Mycenean *a-pe-e-ke* : *e-e-to* and Attic λέλυκα : λέλυμαι. In the aorist middle -κα was extremely limited (footnotes 2 and 16).

[15] τετολμήκαμεν 1.159.2, μετεσχήκατε 3.80.2, νενομίκαμεν 4.27, εὑρήκαμεν 8.109.2, προδεδώκατε 9.7.β1.

[16] On the third plural see footnote 2; the only mediopassive with -κα is ἐθήκατο 11x, ἐθήκαντο 9x, ἐθήκαο once (including compounds).

[17] Beside βεβρώ-θ-οις.

3a. Previous theories as to the origin of the -κα-aorist and -perfect.[18] Current orthodoxy[19] sees the ultimate source of the velar in a root-extension: the *Lexikon der indogermanischen Verben* (ed. H. RIX 1998) even contains an entry **d̑ʰeh₁-k-* "machen", although it separates Greek ἔθηκα (120f.). And the zero-grade **d̑ʰh₁-k-* behind Latin *fac-*, Oscan *fefac-*, Venetic *vhagsto* and perhaps Phrygian αδδακετ(ορ)[20] is paralleled by e.g. **k̂lu-s-* beside **k̂leu̯-s-*, **k̂u̯i-t-* beside **k̂u̯ei̯-t-* and the like.

While credible for Italic where all the paradigmatic forms show the extended root,[21] this approach is implausible for Greek since the original limitation to the singular active of both formations is not how root-extensions normally operate;[22] an assumption of "suppletion" between extended and unextended roots *within a paradigm* is totally unparalleled.[23]

Among the believers in root-extensions, S. KIMBALL argued convincingly that the primary synchronic function of the Greek -κ- was to break hiatus, as implied by the complementarity of -α -ας -ε after consonant with postvocalic -κα -κας -κε (1991:141, 151). Unexplained remains why only three long-vowel aorists were κα-extended in this way and not ἔστᾱ, ἔτλᾱ, ἔγνω and the others.

J. UNTERMANN emphasized the differences between the *k*-extensions of Greek and Latin. In Italic, he proposed, the extension served a semantic function, transforming *fē/fa-* "stellen, legen" (as in the forms of footnote 21) into *fēc/fac-* "herstellen, machen" (*Indogermanica et Italica* (Festschrift H. Rix, ed. G. MEISER *et al.* 1993) 466).

[18] For first orientation see K. JOHANSSON 1890:56ff.; BRUGMANN-THUMB 1913:318 fn., 323f., 376; E. SCHWYZER 1939:741.

[19] Going back at least to Chr. BARTHOLOMAE, *KZ* 27 (1885) 355.

[20] Though this could also continue **d̑ʰēk-*; the unextended root is seen in the aorist εδαες (cf. Hittite *daiš*).

[21] While the unextended root survives extraparadigmatically, e.g. *sacer-dos* (beside *sacrificium*), *fē-tiālis*, *con-*, *ab- crē-dere*, Oscan **prúffed**, and so on.

[22] Whereas the spread of the extension to nominal forms (§13) is perfectly normal. Hittite *au(š)-* contains a metanalysed ending (3.sg.pret. *-š*), not a root-extension.

[23] E. PETERSEN, *Language* 7 (1931), 128 equated ἧκα with *iēcī* from **h₂i̯eh₁k-* but derived εἷμεν from the root **seh₁-* of *sero sēvī* (accepted by SCHWYZER 1939: 741); differently S. KIMBALL 1991:142.

J. HARÐARSON concluded that our problem has as yet found "keine endgültige Lösung" (1993:146-50).

3b. Various scholars have operated with the near-deictic particle **k̂e*, most recently A. BAMMESBERGER 1984. This is what I also believe to be correct, but I find many aspects of his and all other previous presentations of this approach to be unacceptable, see §10a.

3c. Since active preterites with a third singular in *-ke* are found not only in the IE dialects mentioned above but also (partly recharacterised with *-d* or *-t*) in Oscan (see §7), Faliscan,[24] Siculian,[25] Etruscan,[26] and Rhaetic,[27] a "Mediterranean" substratum has occasionally been proposed.[28] This is a mere *obscurum per obscurius* so long as we can not specify where it originated.

4a. For the origin of the κα-perfect three further ideas have been proposed, none of which however accounts for the complementary distibution with the κα-aorist.

A laryngeal "hardening" of **-Hh₂-* to *-k-* in such preforms as **de-doh₃-h₂e* was envisioned by E. SAPIR and E. STURTEVANT. For bibliography and critique see W. COWGILL in *Evidence for Laryngeals*² (ed. W. WINTER 1965) 175f.; J. RASMUSSEN sees further evidence for this phenomenon in Lithuanian *pir̃kti*, pret. *pir̃ko* "buy" (*Selected Papers on IE Linguistics* II (1999) 642f.). This approach leaves the κα-aorist totally unexplained, unless one is prepared to assume "confusion between the two tenses from IE times" (E. STURTEVANT, *The Indo-Hittite laryngeals* (1942) 88 fn. 48).

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[24] VETTER 1953, nr. 339d *nuidice* "posuit" or, with HELBIG, *ipice* "impigit"? See GIACOMELLI 1963:150, 154, 251.

[25] Montagna di Marzo *-saged*, *agepipoked*, see A. MARINETTI, *Lingue e dialetti dell'Italia antica, aggiornamento e indici* (1982), 59.

[26] E.g. *lupuce* "mortuus est", *amce* "fuit", *zinake* "fecit", see H. RIX in: *Die Etrusker*, ed. M. CHRISTOFANI (1985), 233 and *op. cit.* in the next footnote; D. STEINBAUER, *Neues Handbuch des Etruskischen* (1999) 102-3.

[27] E.g. the frequent *zinake* "dedicavit" see H. RIX, *Rätisch und Etruskisch* (1998) 36-45.

[28] For references see JOHANSSON 1890:59; SCHWYZER 1939:63; GIACOMELLI 1963:154 fn. 96.

4b. More promising at first seems F. HARTMANN's proposal of a morpheme-boundary shift by which the final velar of certain roots was metanalysed as the first element of the suffix. Crucial would have been not *δέδορκα*, *τέτηκα* and the like but rather verbs where the *-k-* was absent from the present due to the effect of sound-laws, such as *ἐΐσκω* : *ἔοικα*, *λάσκω* : *λεληκώς*, *φρίσσω* : *πέφρικα*, *πτώσσω* : *πέπτωκα* and *δειδίττομαι* : *δείδοικα* (*KZ* 28 (1887), 284-9). This does not however account for the original limitation of the suffix to the singular active of long-vowel roots.

4c. K. BRUGMANN saw the origin of both aorists and perfects in Greek *δέδωκα* if compared with Vedic *dadāśa* "offers, worships" (*KZ* 25 (1881), 212-24), but this belongs, with *dāśnoti*, to IE **deḱ-* "accept", not to **deh₃-*; nor does anything speak for an old suppletion between these two roots.

5a. Predecessors of the *κα*-aorist. To the plural forms *ἔδομεν ἔθεμεν* the expected singulars would be "*ἔδων*, *ἔθην*", to judge by e.g. *ἔφαμεν* - *ἔφην* and the Vedic singulars *adām* and *adhām*. The only inscriptional evidence for the expected form is Boiotian *ἀνέθε̄*, but this at least is relatively certain[29] now that further attestations[30] preclude taking SCHWYZER *DGE* 472.B14 (ca. 500 BC) as a graphic error for *ανεθε̄*<*κε*>.[31] The survival of the unextended form longest in composition has suggested an original complementarity *ἔθηκε* : *ἀν-έθη*; however such pairs as *ἴθι* : *ἄπ-ει* can no longer serve as a parallel (DUNKEL 1985:64 with fn. 96) since a continuant of the simplex **h₁éi̯-Ø* has been recognised in *εἰ δ'ἄγε*.

5b. The Greek aorist "passive" in *-θη-* and the Germanic weak preterite

[29] Whereas *ἔδων* is attested to my knowledge only in H. GRASSMANN, *Wörterbuch zum Rig-Veda* (1973) 590b.

[30] In Thebes (4th century BC) and on Attic vases found in Delphi from the 5th century, see HARÐARSON 1993:146f. Compare also Oscan *ανα:ϝακετ* (VETTER 190).

[31] With B. FORSSMAN, *MSS* 23 (1968) 7ff.

have both frequently been derived from an unaugmented aorist[32] of the root *d^heh_1- in auxiliary function[33] - without wishing to exclude other sources, to be sure.[34] While instrumentals precede the auxiliary in Germanic, in Greek "infinitive-like" formations (BRUGMANN-THUMB 1913:327 Anm. 2; *Grundriss*² II.3 (1916) 173) or abstracts are seen. I would add governed collectives and other inanimates with morphosyntactically justified zero-endings;[35] their presents would have been athematic denominatives (Aor. *τιμᾶ θή to present *τίμᾱ-μι). The augment, when necessary, would naturally have been transferred to word-initial after univerbation: just as καθ-ῖζον (with "temporal" augment) was remodeled to ἐκάθιζον, so might an original *τιμᾶ / τέλος ἔθη have been remade to ἐ-τιμά-θη or ἐ-τελέσ-θη. The most important point about any such scenario has however never been explicitly made, namely that it presupposes the one-time existence in Greek of exactly the κα-less singular aorist postulated above.

6. Certain particles can either precede or follow the word they modify, compare Vedic *í-dr̥ś-* with Greek τοδ-ί and in general the full word-structure-formula *Word = (P+) R (+S) +E (+P)*. Due to the alternative word-structure possibility Word = P, expandable to Word = (P+) P (+P), we sometimes even come across the same particle-combinations in both orders:

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[32] In Mycenean, the only augmented verb-forms are κα-aorists: *a-pe-do-ke* (beside *a-pu-do-ke*), *a-pe-e-ke* (beside *a-pi-e-ke*) and *e-e-to* (with -κα excluded form the mediopassive); differently *te-ke* and *po-ro-te-ke*.

[33] K. BRUGMANN, *Kurze vergl. Grammatik* (1904) 549f.; H. HIRT, *Handbuch der Griech. Laut- und Formenlehre*² (1912) 558; H. RIX 1976:219f. G. SCHMID, *KZ* 90 (1976) 270 devotes only one sentence to the comparison, while R. LÜHR rejects any role for the root aorist (in *Germanisch und Indogermanisch* (ed. J. UNTERMANN *et al.* 1984) 47f.), taking the Gothic first plural *-dedum* as an analogic creation (49f.) rather than as a contamination of equivalents to Vedic *dhāma* and Greek θέμεν.

[34] E.g. a hypercharacterised second singular secondary mediopassive ending continued by Vedic *-thās* and Greek -θης (see §8d of DUNKEL forthcoming b); in Germanic the continuants of verbal adjectives in *-*tó*- also played a role.

[35] I.e. the same types of form which led to the IE principle of stem-composition, see *Compositiones indogermanicae in memoriam Jochem Schindler*, hsg. H. EICHNER *et al.* 1999, 47-68.

Gaulish *du-cī*[36]	:	Latin *cĕ-dŏ*
Latin *nun-c*	:	Hittite *ki-nun*
Avestan *auu-aṯ*	:	Vedic "*adas*" < **adau̯*
Vedic *u-tá*	:	Gothic *þa-u*
Vedic *u ca*	:	Vedic *co*
Greek *γάρ*	:	Lithuanian *ar̃gi*, *ar̃gu*
Latin *quisnam*	:	Latin *nam quis*
Latin **dō/*dē-na-*k^w*e*	:	Vedic *cana*, Gothic *-hun* < ***k^w*e-na*

7. Near-deictic **k̂e* could modify following verbs in Greece and Italy. Oscan presents *ce-bnust* "will have come hither" and **kellaked** (P. POCCETTI 1979, nr. 14, 15) if from **k̂e-le-lak-ed*.[37] Latin preserves *cēdō* "proceed" from **k̂e-sd-* "approach" to the root of Greek ὁδός, Slavic *xoditi* etc.[38] In the latter's desiderative *arcesso* "fetch", **k̂e* "hither" has been semantically reinforced by **ad-* "toward", just as happened with other obsolescent local adverbs in e.g. *ab+so-*, *dis+so-*, *ex+po-* (cf. Greek ἐξ-απο-) and probably also *dis+vi+dere*;[39] compare Greek μετα-ξύ, ἀμφι+περί and εἰς ... δῶ.

In a few Homeric forms it has long been unclear whether the initial syllable κε- is a reduplication or the near-deictic particle:[40] κέ-κλυτε 31x, κλῦ-τε 6x; κέ-κλυθι 3x, κλῦθι 12x[41] and the aorist ἐ-κέ-

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[36] On Lith. *dúo-k* see §10a; on South Picene *kduíú* see footnote 37.

[37] H. RIX argues against seeing **k̂e* in South Picene *kduíú* and *qdufeniúí*, *KZ* 107 (1994) 110-2.

[38] In fact **k̂e* might have helped to differentiate 2. **sed-* "go" (*IEW* 887) from 1. **sed-* "sit", compare the role of the preverb in Vedic *upa sad-* "sit down by, approach".

[39] Contra *KZ* 95 (1980) 230. Closer to a true *āmredita* is Ennius *Ann.* 379 *ex-e-rugit*.

[40] A similar uncertainty concerns the initial syllable of Greek ἑσπόμην and (καθ-)ἑζόμην: augment (with analogical asper) or reduplication (cf. Ved. *si-ṣak-ti*, 3.Pl. *sa-śc-ati* (though presents) and Av. *hazd-iiāṯ* (though athematic))?

[41] W. SCHULZE 1892:394 attributed κλῦτε to quiet speech, mostly women's, and κέκλυτε to loud speech, mostly men's - a pioneering observation of genderlects. Note also Armen. *lsem* < **k̂lu-k̂e* (friendly tip of B. Vine) and fn. 51.

κλετο;[42] on Homeric *ἐπεὶ κε κάμω(σιν)* see footnote 46. It is suspicious that all examples should be precisely from roots which begin in *k*-, though we may compare the restriction of the Oscan *k*-perfect to stems that contain a voiceless velar: **kellaked** if = "concameravit", *σακαρακιδ* (POCCETTI 1979 nr. 186, 187) if = "sacravit", *λιοκακειτ* (VETTER 1953, nr. 184.5) "locavit(?)".[43] However due to the prehistoric shift of near-deictic *κε* to modal function in certain components of the epic *Kunstsprache* (§9) the only instances of deictic *κε*- with verbs which survived were those which could be reinterpreted as reduplications.

As to the third Mediterranean peninsula, M. JANDA has recently proposed that Old Phrygian *lakedokey* continues **lē k̂e dŏkei̯* "er soll nicht hingeben", with deictic **k̂e* preceding a *k*-extension comparable to that in Greek *ἔδωκα* and *δώκω* (1997:274-6), although for Phrygian **dh₃-ke* is also possible.

Further evidence for **k̂e* - or rather for its ablaut-variant **k̂o*- - before verbs might be revealed by a re-analysis of Germanic perfectivising *ga*-[44] and of Latin *co*-, which became synchronically the prevocalic (!) allomorph of *com*- "together". E.g. just as *cēdō* once meant "*approach", so *cōgō* "compel" might have developed from "drive hither".

8. Near-deictic **k̂e* could theoretically also follow verb forms, but examples are less frequent - at least at first sight. Still, the odd terminal reduplication in *ἠρύκακε*, the Homeric aorist of *ἐρύκω* "restrain, detain" (Attic *ἤρυξα*), might have arisen in a first singular root-aorist **ἤρυκ-α* (cf. *ἔχεα ἤνεγκα*). Once deicticised with **k̂e*, the complex *ἠρύκα-κε* was evidently metanalysed as a third singular, e.g. by misinterpreting a direct quote as person-shifted, i.e. "He said 'I did it'" as "He said he did it". The resulting third singular *ἠρύκακε* then served as the model

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[42] Whether this belongs to *κέλομαι* (later *ἐκέλευσα*) or to *καλέω* (later *ἐκάλησα*).

[43] See O. PARLANGÈLI in: *Gli Italici del Bruzio nei documenti epigrafici* (1960) 33-5.

for ἠνίπαπε to ἐνίπτω (beside ἐν-ένῑπ-ε with "Attic" reduplication).[45] We note once again, not for the last time, the fateful interplay of the particle κε and reduplication.

Compare perhaps also Messapic *klaohi zis* if = "κέκλυτε", with a secondary palatalisation of **k̂e* (or of suppletive **k̂i*) > *zi* as in *Dazimas* "Decimus", cf. **ĝ* > *z* in *adazinnota*, Aor. *azen*.

9. The "modal particle" in Homer. Lesbian, East Thessalian and Cypriot use κ(ε) in modal function and in Homer this is one of the three signs (along with κεν and ἄν) which syncretised into the trinity of functions known as the "modal particle". L. PALMER suggested a deictic origin "in this case" for the limiting function, often proposed as basic for Homer (DUNKEL 1990:111-2, 129). Even more clearly than deictic κε (§7-8), modal κε often directly precedes[46] but only rarely follows[47] its verb in Homer.

Originally, then, κε was everywhere deictic; only later did the modal usage crystallise, a syntactic metanalysis which enabled distinguishing the potential from the cupitive optative. Seeing deictic **k̂e* as the predecessor of modal, "limiting" κε considerably strengthens the case for the modification of verb-forms by deictic **k̂e* in prehistoric Greek.

10. The κα-aorists and -perfects as deictic in origin.
10a. By far the deepest and most thorough argument that the particle **k̂e* played the main role in the origin of the Greek κα-formations was the very first. Without explicitly positing particle-syncretism (DUNKEL 1990 and 1997:160f), H. OSTHOFF 1884:326f., 348 nonetheless saw final -κα and κε each as "ein späteres von aussen an die f e r t i g e perfectform angeschmolzenes accedens" (326, OSTHOFF's emphasis),

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[45] Double reduplication initially is seen in perfects like Attic δεδίδαχα and Pindaric δεδαιδάλμενος (*O.* 2.53).

[46] κε (not counting κ') occurs immediately before a verb 65 times in the *Iliad*, 27 times in the *Odyssey*, e.g. *Il.* 1.168, 7.5 etc. ἐπεί κε κάμω(σιν), 1.32 ἀλλ' ἴθι, μή μ' ἐρέριζε, σαώτερος ὥς κε νέηαι; 9.619 φρασσόμεθ' ἤ κε νεώμεθ' ἐφ' ἡμέτερ' ἦ κε μένωμεν.

[47] Only *Il.* 3.220 φαίης κε and 6.285 φαίην κε (both verse-initial) and *Od.*4.644 ... δύναιτό κε καὶ τὸ τελέσσαι.

namely the modal particles *κα*[48] and *κε*[49] respectively. These he univerbated with fully-formed perfects sporting a radical *e*-grade in the first and *o*-grade in the third singular (350): **d̑ʰe-d̑ʰeh₁-a kn̥* > *τέθηκα*, **ste-steh₂-a kn̥* > ἕστᾱκα and **d̑ʰe-d̑ʰoh₁-e k̂e* > "*τέθωκε*", **ste-stoh₂-a k̂e* > "ἕστωκε", respectively. Analogic spread of the first singular root-allomorph explains the lack of *o*-grades. As typological parallels for deicticised verb-forms OSTHOFF adduced, without connecting genetically, the Lithuanian imperative in *-k* (354) and the Vedic *-u*-perfect, which is also limited to the first and third singular (§11c). He derived the *κα*-aorists analogically (372f.) and speculated as to why this did not happen to ἔβη ἔστη ἔγνω and the like (373-7).

I believe that OSTHOFF was right in principle but, perhaps paradoxically, too unprincipled in his treatment of particles. For all its merits, his analysis reflects a fundamental misperception of the deictic origin, even of the inherited nature, of Greek *κε* and of its role in the triple suppletion underlying the Greek "modal particle" (§9). Why should modal *κε* and *κα* (the latter not even Homeric!) accompany indicatives which are not used contrary-to-fact? For OSTHOFF, they are mere elements of form to be combined as needed, without regard to their function. His account of the missing *o*-grade is also unacceptable, based as it is on a faulty pre-form with **e* in the first singular, this itself a consequence of accepting Brugmann's law without knowing of the laryngeal in the first singular perfect ending.

H. HIRT, *Indogermanische Grammatik* IV (1928) 114f., compared the Lithuanian imperative directly with the Greek *κα*-aorist rather than as a formal parallel, this being made possible by ignoring the non-assibilation of the palatal in Lithuanian; HIRT saw the same particle not only in Latin *hic*, but in Vedic *ásr̥+k* as well. The *κα*-perfect was not mentioned.

T. MARKEY 1980/1 offers many parallels of deicticised verb-forms from various creoles but remains far too vague about the precise syntagms in which the "archaic deictic particle **k*" (280) in his view marked the "external active object" (290) in IE itself to be convincing.

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[48] For OSTHOFF the Proto-Greek zero-grade of *κεν*, 1884:329. In my opinion West Greek *κα* is due to a Doricising polarisation of α for ε as also in γα, ὅκα, -δα, -θα, ἵαρος, Ἄρταμις; a comparably deliberate Doricisation was the substitution of velar for dental in ὅκα, 3.pl. -καν, aorist -ιξα, abstract -ξις, ὄρνιχ-, κλᾱϝικ- and so on.

[49] For OSTHOFF a contamination of *κεν* and *κα* (333) and the "jüngste Partikelform" (350-1).

Proposals of entirely new grammatical categories such as an objective conjugation in the IE proto-language require much more detailed argumentation than MARKEY provides. Still, his basic point, that deictic specification of verb-forms is a widespread phenomenon, is well taken (§11).

A. BAMMESBERGER 1984:75-6 saw the origin of the κα-aorist in the imperative, as in Lithuanian *dúo-k(i) eĩ-k im̃-k* and the like. No such form however occurs in Greek at all; as to the actual aorist imperatives *θές δός ἕς*, characteristic of precisely the three roots which formed the κα-aorist and themselves notoriously problematic,[50] we hear not a word, nor of the κα-perfect.

On the Baltic side, BAMMESBERGER left the problematic non-palatalisation of Lithuanian *-k(i)* also entirely unmentioned. Although some (e.g. HARÐARSON 1993:150 fn. 21) are ready to suppose "incomplete satemisation", a regular reflex of near-deictic **k̂i* in Lithuanian is seen, as HIRT pointed out, in the further near-deicticisations *duok-š* and the like, with *šè* from *šìs* < **k̂i-*. Instead, imperatival *-k(i)* arose regularly by fading in syntagms like **déh*$_3$*-Ø* k^w*id* "give to some extent" (after ***k^w*id* > **kit* > *kì*), compare Greek *οὐκί* "not at all" < **h*$_2$*oi̯u* k^w*id*. This is, incidentally, the only trace of the stem ***k^w*i-* in Baltic (STANG, *Vergleichende Grammatik der baltischen Sprachen* (1966) 236).

Most important is that **k̂e* after imperatives is after all only a special case of the IE word-structure formula according to which a particle could precede or follow any morpheme-sequence containing a root and an ending (§6).[51] This usage was no more frequent in the imperative than anywhere else, as we have seen (§7-9); Latin *cedo* and Gaulish *duci* are only special cases of a more general use of **k̂e* to mark verb-forms near-deictically in various modes and tenses.

10b. A new theory for the aorist. Morphologically, the Greek verbs for "put, place", "give", and "release, throw" form a group in other

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[50] See K. STRUNK in *KZ* 100 (1987) 333, 336 and in *Eusebeia kai Eumusia* (Festschrift A. Dihle, ed. G. MOST *et al.* 1993), 469-72 and §8e of DUNKEL forthcoming b.

[51] This principle, enunciated in DUNKEL 1987, 1988 and 1992, is lacking in HARÐARSON's critique of BAMMESBERGER (1993:149-50 with fn. 19). Deictic **k̂e* seems to be simultaneously pre- and postposed in Epicharmus' *κέκλυκε* ("errore simul et ioco natum" according to W. SCHULZE 1892:393); on Old Phrygian *kedokey* see §13.

respects as well, e.g. their aorist imperatives θές δός ἕς and their "contract" imperfects in -ει(ς) and -ου(ς). The general usefulness of a deictic specification of these verbs needs no comment.[52] The near-deictically specified root-aorist of τίθημι, meaning "I have put here" (cf. UNTERMANN's "habe hergestellt") would have looked like this once final *-*t* had been lost:[53]

ἔθην-κε	ἐθέμεν-κε
ἔθης-κε	ἐθέτε-κε
ἔθη-κε	ἔθεν-κε

Every person in this paradigm (and similarly *ἔδων-κε, *ἕην-κε) is unambiguous except for the third singular, where no segmental personal ending is present. Here the word-final -ε was liable to be reinterpreted[54] as the ending known from such preterites as ἔφερε, εἶδε, ἔλυσε. In this critical form a morpheme-boundary shift[55] *ἔθη-κε > ἔθηκ-ε would have caused the κ- to be understood as part of the stem. This can of course have occurred only after word-final stops were lost, otherwise *ἔθητ-κε would have given *ἔθηκτε (as in τίκτω). Since the survival of secondary *-*t* > -*d* in Italic vitiates a corresponding derivation of *fēcit* from "*efēd-ke*", BARTHOLOMAE's equations ἔθηκα - *fēcī* and ἧκα - *iēcī* are no longer valid.

From here the next step was columnar analogy through the singular, while the jump to the third plural in the Homeric period was simply due to that form's frequency in real speech. The spread of -κα- to the first and second plural perfect took place between Homer and Herodotus (§2b). Thus the Homeric limitation of -κα- to the singular and third plural active in both tenses, though striking, is reduced to a mere chance artifact, structurally meaningful only as an intermediate stage in -κα-'s analogical spread from its origin in the third singular. This in turn forms one component of the triumph of alpha-thematic

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[52] Beside MARKEY 1979 and 1980/1 see G. RAUH "Tempora als deiktische Kategorien", *IF* 89 (1984) 1-25 and 90 (1985) 1-38.

[53] That this occurred after Proto-Greek is shown by developments like *φερετ-πολις > φερέ-τπολις (cf. Skr. *Bhavád-vāja-* and DUNKEL 1992:199f.).

[54] Only by the "intuition" of a native speaker, never by a trained linguist.

[55] Not an insertion, which would have produced an element belonging neither to the root nor to the ending, i.e. a new suffix, as happened precisely with the (restored) -σ- of the *s*-aorist.

inflection in Greek verb-morphology, as seen in the modern imperfect and preterite.

Greek stands revealed as the substrat at the origin of the "Mediterranean" third singular preterite in *-ke*. And the relevance of the particles for the resolution of grammatical problems far outside their own sphere is once again confirmed (see DUNKEL 2001 and forthcoming b).

11. Deixis in other IE verb-formations must of course be distinguished from univerbation with pronominal forms, as in *$*h_1$ei̯-toad*, **sekʷ-e-su̯o*, Sapphic *σύμμαχος ἔσσο* and the like.

11a. Deixis was first posited for the IE imperative in **-tu* by H. OSTHOFF 1881:259. The opposition with the "hic-et-nunc" **-t+i* caused the reinterpretation of **-t+u* as "ibi et tunc", i.e. not here and now, i.e. *$*h_1$es-ti* "it is, exists (now)" : *$*h_1$es-tu* "let it be (then)".[56]

11b. Emphatic **-om* was discerned by R. THURNEYSEN 1885: 175 in the Aryan middle imperatives in *-tām*, *-ntām* beside their injunctives in *-ta*, *-nta* and in the Greek aorist imperative *δεῖξον* beside the injunctive **dēi̯k̂-s-s*.[57]

11c. For the Vedic perfects *dadhau dadau tasthau paprau jajñau* etc. a far-deictic analysis was suggested by H. OSTHOFF 1881: 259 and 1884:327 and further developed by G. SCHMID, *Glotta* 67 (1985) 76. Both propose that normally formed perfects were far-deictically specified with +*u̯*.[58] That is, the *-u̯-* was not part of the root but has been added to a completely formed perfect form such as *$*d^he$-d^hoh_1-*

[56] For bibliography and more material for this opposition see *Die Laryngaltheorie* (ed. A. BAMMESBERGER 1988) 110 (with fn.7)-113; on the later imperative in **-toad* see DUNKEL 1997:30-2 and §7 of DUNKEL forthcoming a.

[57] The first element might also have been the *si*-imperative **dei̯k̂-si*, see DUNKEL 1992:216ff. and §9 of DUNKEL forthcoming a.

[58] On far-deictic *u* in the *Rgveda* see *IF* 102 (1997), 171-4. T. MARKEY 1979 provides useful typological parallels but implausibly starts from the *nominal* oppositional suffix **-u̯o-*.

e.[59] Interestingly, of the 34 verbal forms followed by *u* in the *Rgveda*, only one is a perfect (10.130.2c *úpa sedur ū sádaḥ*), though *u* often follows aorists (*abhūd araig asthur* ...), presents,[60] and imperfects.

For what is a purely Indic (not even Iranian) phenomenon, this appealingly straightforward approach avoids one problem root-extensions cannot: why is there no *+*u̯* in the second singular? *+*u̯* served not to disambiguate but only to remedy the invisibility of the synchronic ending *-a*.

Semantically, G. SCHMID thought that the *u*-deicticised perfects expressed "keinen gegenwärtigen Zustand" (1985:77) but instead "die entferntere, nicht ganz präsentische Gegenwart" (81). This finds no support in the texts, where the *u*-perfects are semantically indistinguishable from any others; they must therefore have faded semantically. They were not reinterpreted as imperatives as in §11a because the perfect, being itself a type of present, stood in no contrast to a "hic-et-nunc" form in *-*i̯*.[61] Similarly, in the thematic locative plural the continuants of both *-*oi̯s*+*i* and *-*oi̯s*+*u* faded semantically in the dialects because they nowhere stood in opposition to each other.[62]

To apply this approach to Latin *plēvī*, *nōvī* and the like would require multiple further recharacterisations: *nōvit* would have arisen from **ĝnoh₃-e+u̯* by the re-addition of *-*e*, and then, as is generally assumed, of primary *-i* (footnote 61) and of *-t*. Whether this approach should be further generalised to include Hittite *-hun* (from *-*h̯a*+*u̯*+*un*) or the Tocharian *-wā*-preterite is a separate question. Still, such considerations might eventually help us to better understand the system of IE root-extensions - if only by clearing the decks of

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[59] Cf. YAv. *daδa* and Lepontic *TeTu* = *dedu*; note Rgvedic *paprā* (1.69.1) beside *paprau* (thrice).

[60] After primary *-si* and *-ti* is found only *íd u*, but 8.61.5a *śagdhy ū ṣú* and 6.16.16 *ehy ū ṣú*.

[61] The dialectal primarisations of the perfect endings (*-*h₂e*+*i̯* in Anatolian, Italic, Slavic, etc.) being self-evidently well-motivatied and therefore independent.

[62] Although Arcadian *-οιυν* could conceivably continue *-*oi̯su* beside Attic *-οϋν* < *-*oi̯sí* (N. DEPLAZES, *Der griech. Dativ Plural und oblique Dual* (1991) 177).

material that is better explained otherwise, such as seeming **d^{h}eh$_1$-k-* and **Hi̯eh$_1$-k-* (§10 end), **dh$_3$-u̯-*, **ĝneh$_3$-u̯-* and the like.[63]

11d. The delocative imperative in *-d^{h}í. Beside the full-grade, "endingless" athematic imperative **h$_1$éi̯-Ø*, an **h$_1$i-d^{h}í* must also be reconstructed: Hittite *īt* / *e-ḫu*, Greek ἴθι / εἶ (δ'ἄγε) (DUNKEL 1997:34, 36); so too **h$_1$s-d^{h}í* beside **h$_1$és-Ø* and others. The morpheme *-*d^{h}í* (also *-*d^{h}éi̯*) occurs otherwise only as an adverbial ending (E$_2$)[64] with locative value: Vedic *ádhi*, Greek -θι, **ku-d^{h}ei̯* > Latin *ubī*, OCS *kŭdě*, cf. suppletive *-*d^{h}e* in Vedic *kúha*, *ihá* and Greek -θε. Is this chance homonymy or historical identity? In light of the preceding, the univerbation of the imperative **h$_1$éi̯-Ø* with the accented E$_2$ *-*d^{h}éi̯/í* seems to have led to the zero-grade of the root seen in **h$_1$i-d^{h}í*.[65] The crossover from adverbial to verbal usage might have taken place in perseverative homoioteleuta, the power and appeal of which should not be underestimated. For examples from historical dialects see §9 of DUNKEL forthcoming a; an already IE instance occurred when postpositive *-*ṓ*, originally used with pronouns, was carried over into the first singular subjunctive e.g. in replies to imperatives:

**h$_2$éĝ-e-Ø*!	**eĝH-óh$_1$ h$_2$éĝ-o-mi* > **eĝH-óh$_1$ h$_2$eĝ-oh$_1$*
**h$_1$éi̯-Ø*!	**eĝH-óh$_1$ h$_1$ei̯-mi* > **eĝH-óh$_1$ h$_1$ei̯-oh$_1$*

Something similar seems to have happended to the imperatives themselves when they were used with locatival adverbs:

**i-d^{h}í h$_1$es-Ø* "be here!"	> **i-d^{h}í h$_1$s-d^{h}í*
**i-d^{h}í h$_1$ei̯-Ø* "come here!"	> **i-d^{h}í h$_1$i-d^{h}í*
**u̯óik̂-o+d^{h}i*[66] *h$_1$ei̯-Ø* "come into the house"	> **u̯óik̂o-d^{h}i h$_1$i-d^{h}í*

[63] For a sound law *-*oh$_3$e-* > *-au* which would hold for the duals as well see W. COWGILL, *MSS* 46 (1985) 27; to me a suppletion *-*o-h$_1$e* : *-o-h$_1$u* (among the endings!) sounds more likely.

[64] THURNEYSEN 1885:180 speaks of a "preposition".

[65] In contrast to the "future imperative" **h$_1$ei̯-toad*.

[66] Whether this is to be understood as proleptic (type Ἄιδι προΐαψεν, *devéṣu gacchati*) or as a hypercharacterised directive is immaterial for the present.

By the same mechanism, the diphthong of *$h_1$ei̯-Ø was itself transformed into an ending of the Greek thematic imperative:

εἰ δ'ἄγε, πίε etc. (DUNKEL 1985) > εἰ δ'ἄγει, πίει, δίδοι.

Perhaps the problematic Old Phrygian imperative ending in *kedokey* (JANDA 1997:275f.) arose in the same way.

12. From the κα-aorist to the κα-perfect. The rise in Greek of the "resultative perfect" (WACKERNAGEL, *Kl. Schr.* 1001) necessitated the creation of many new perfect stems. A direct application of the same reasoning used for the aorist, i.e. presuming a combination of deictic *$\hat{k}$e with the expected perfect forms (cf. **dadā+u̯* in §11c) will not work because of the vocalism: the addition of deictic *$\hat{k}$e to the expected "βέβω, τέθνω, ἕστω" (from *g^we-g^woh_2-e, *d^he-d^hnoh_2-e, *s(t)e-stoh_2-e) would have given "βέβωκε, τέθνωκε, ἕστωκε" instead of the actual βέβηκε, τέθνηκε, ἕστηκε. The only evidence which can be cited for this is hellenistic ἕωκα, taken by OSTHOFF as representing **i̯e-i̯ō-e-k̂e* (1884:326), but despite S. KIMBALL 1991:146f. this form is too recently and too tenuously attested to provide a convincing basis for the entire scenario.

I suggest that those κα-perfects which share the vocalism of their aorists (βέβηκε, ἕστηκε, τέτληκε like ἔβη, ἔστη, ἔτλη) arose through neo-reduplication[67] of κε-deicticised singular aorists: ἔβη-+κε > βέβηκε, ἔστη+κε > ἕστηκε, ἔτλη+κε > τέτληκε, further ἔφυ+κε > πέφυκε, ἔβρω+κε > βέβρωκε and ἐδάη+κε > δεδάηκε. Here we see yet another interplay between the particle κε and reduplication. In contrast however to the development of the κα-aorist, the undeicticised aorists ἔβη, ἔστη, ἔφυ and so on remained intact beside these new perfect forms. Finally, this accounts for the complementary distribution in Homer (§1c): The κε-extended root-aorist survived in three roots; elsewhere it was remade into a perfect and the unextended root-aorist survived.

Taking both the κα-aorist and the κα-perfect as transformations of root aorists would explain why so many Homeric κα-perfects

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[67] A similar development may underlie Italic **efaked* > *fefaked* and others. The oft-proposed proportion ἔθεμεν : ἔθηκα = βέβαμεν : X, X = βέβηκα (SCHWYZER 1939:776) is formally correct but leaves the complementary distribution of κα-perfects with the κα-aorists unaccounted for.

suspiciously both lack an *o*-grade and match their aorist. It also accounts for the limitation to long-vowel roots since in Greek root-aorists, with rare exceptions like ἔχεα and *ἔρυκα (§13), were formed from roots in a synchronically long final vowel.

To assert that perfects and aorists did not influence each other in Greek (KIMBALL 1991:146-8) is to ignore both the near-identity of their personal endings from earliest times and their manifest destiny of convergence in the Modern Greek preterite. The present proposal pushes the beginnings of this process back in time. The limitation of the κα-aorist to only three roots is also an artifact: all long-vowel aorists could originally be deicticised; it is just that the result lived on only in these three as aorists, in the rest as perfects. Thus the Homeric complementarity of the two formations is brought a step nearer to a solution.

"Long-vowel" roots:	Spread of -κα:		
	Active		Mediopassive
	Homer	Herodotus	
1. θη- δω- ἡ-:			
*edhēt > *ἔθη (dies out but cf.	aorist passive -θη)		
*ἔθη+κε > κα-aorist ἔθηκε	3.pl. -καν beside -σαν	(no change)	Homer 2x
2. All others:			
*egʷāt > ἔβη (stays alive)			
*ἔβη+κε > κα-perfect βέβηκε	3.pl. -κασι beside -ασι; Ppe. -κώς	in 1, 2 plural (§2b)	never

The next step was to KeRH- ("disyllabic") roots, as in Homeric βέβληκε beside ἔβαλον, κέκμηκε beside ἔκαμον, τέθνηκε beside ἔθανον, and μέμβλωκε beside ἔμολον. In such roots the κα-perfect was based on the mediopassive perfect: βέβληκε to βέβληται and κέκμηκε to κέκμηται. This pattern then generated corresponding formations even in the absence of a mediopassive, as in τέθνηκε, μέμβλωκε (LEUMANN's "Überspringen des Zwischenglieds").

The formation then spread to KeR-roots, as in Arcadian εφθορκα beside Homeric ἔφθορα and Attic ἔφθαρκα beside Homeric ἔφθαρμαι. Here the inherited *o*-vocalism lives on in the "refreshenings"; similar is δείδοικα.

The final step was to denominatives and other newly formed

or derived verbal stems. This opened the way to resegmentations, such as *-ηκα*, which also became productive, as in *ἔσχ-ηκα*.

That the motivation for the already Homeric introduction of *-κώς* in the perfect active participle was originally hiatus-avoidance is implied by its absence from Mycenean, where the digamma is still intact.

13. Presents based on *κα*-preterites. The deicticised aorist in *-κε* obviously gave rise to the *-kō*-present Cypr. *δωκω* (cf. Phrygian *-dokei*, §7) and since the earliest function of the perfect was that of a present, Hom. *ὀλέκω* and *δεδοίκω* are not at all surprising either.

Similarly *ἐρύκω* "restrain" might have arisen from a deicticised third singular root-aorist **ἤρυ+κε* "dragged hither" to *ἐρύω*. The new present *ἐρύκ-ω* then built a root-aorist **ἤρυκ-α* (cf. *χέω* : *ἔχεα*), in turn deicticised as **ἠρύκα+κε*[68] and then evidently reinterpreted as a third singular (§8).

The final step is to nominal forms such as in *θήκη* and *νίκη*[69] and Latin *fēc-undus* (metanalysed to productive *-cundus*).

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[68] Cf. Oscan **kellaked** and *λιοκακειτ* (§7).

[69] P. THIEME, *Paideuma* 7 (Festschrift H. Lommel, 1960) 143 (= *Kleine Schriften* 282) fn. 10; G. KLINGENSCHMITT in *Flexion und Wortbildung* (ed. H. RIX 1975) 162 fn. 22.

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Greek λωτός 'lotus' and the Indo-European words for 'blue'

ADAM HYLLESTED

1. A frequent variety of word-formation in Indo-European (and many other) languages is nominalization of adjectives, not least colour adjectives, without change of the morphological form. A substantive like Skt. *nīla-* 'sapphire, Indian fig-tree (m.), indigo (n.)' is derived from the corresponding homonymous adjective *nīla-* 'blue'.[1] No affixes are added, nor is any element removed; the word has only changed word-class and has been assigned the obligatory gender. Other examples are Lith. *bãlas* 'snowdrop' from *bãlas* 'white', Lat. *album* 'white tablet' from *albus* 'white', and German *Singrün* 'periwinkle' corresponding to MLG *singrone* 'evergreen'.[2]

A possible parallel is Gk. λωτός 'water lily, lotus', which is in most etymological dictionaries taken for a word of obscure Mediterranean origin. MUSS-ARNOLT (1892) suggests kinship to Hebr. *lōṭ* 'oil of myrrh', and this etymology is listed by LEWY (1895), FRISK (1973) and GENAUST (1996). The mythological status of the plant could justify this otherwise quite feeble semantic connection. We would, however, expect a secondary thematicization of a foreign monosyllabic word to yield stress on the root syllable. By the following analysis, including facts from natural and cultural history, I hope to show that the word is more likely to be a participial adjective of purely Indo-European origin.[3]

2. The Greek word denoted several unrelated and dissimilar plants. Most well-known are the species whose common name has become *lotus* or *lotos* even in modern European languages, namely water lilies

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[1] In Vedic the word is handed over only as first part of a dvandva compound *nīla-lohitá-* 'dark blue and red, dark red' (BURROW 1973: 219).

[2] Cf. also LIBERMAN's recent interpretation (2001) of English *henbane*, replacing *henbell* with an alleged original meaning 'blackbell'.

[3] I thank Karl-G. Prasse, Jørn Ivar Qvonje and Jan Katlev for providing examples and argumentation.

from the genus *Nymphaea*, aquatic plants with long stalks ending in leaves and flowers that float on the water surface. This genus includes *Nymphaea lotus*, also called Egyptean lotus or 'lily of the Nile', with white petals, and *Nymphaea caerulea*, also called Blue lotus, with light blue petals; some varieties have purple petals.

In Homer's Odyssey, a tribe known as λωτοφάγοι 'lotus-eaters' ate fruits that made them lose all desire to return to their homeland, Ithaca. It is not certain what plant may have been referred to. Finally λωτός was the name of a tree species with black wood which was used for making flutes (LIDDELL and SCOTT). According to CHANTRAINE (1974: 654), this tree was *Celtis australis*.

3. The only feature that unites these different types of plants is the colour.[4] First of all, *Nymphaea caerulea* with light blue flowers was the sacred lotus of ancient Egypt and consequently by far the most commonly depicted lotus species in Eastern Mediterranean art. Even in India, where the sacred pink lotuses (*Nelumbo nucifera*) are the most numerous, the local blue lotus species (*Nymphaea stellata*, *Nymphaea cyanea*) have played and do still play a special mythological and symbolic role.

Secondly, the species most often suggested to represent the fruits eaten by the λωτοφάγοι is *Zizyphus lotus* (jujube or Mediterranean hackberry) whose generic name is probably in itself a reduplicated form of Gk. ζόφος 'dark-coloured, dark violet' (FRISK I 1973: 614; almost a parallel to the name Σίσυφος that is often interpreted as a reduplicated form of σοφός 'wise'). Other bushes in the *Rhamnus* genus have dark blue berries.

As regards the black wood from *Celtis australis*, it is quite common among the world's languages that the range of colours referred to in English as 'black' and 'blue' are designated with the same term. Even in languages where the term for 'blue' covers both dark and very light blue nuances, it can sometimes mean any kind of indefinable 'dark' or 'black' as well (KAY & al. 1997: 48). Compare also the double meaning of Skt. *nīla-* (cf. 1) and Dan. *blå* that was earlier used in the sense 'dark' or 'black' as well: *Blåbjerg* 'the black hill', *blåmand* 'black person, negro' (lit. 'blue man').

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[4] A fourth meaning 'clover, trefoil' probably refers to the shape of e.g. *Trifolium repens* which resembles that of a white water lily, *Nymphaea lotus*.

4. I therefore believe that the best candidate for an etymology of λωτός is the PIE root **(s)lei̯H-* '(being) blue', reflected in e.g. Slov. *slȋv* 'blue', SCr. *šljiva* 'plum', Lat. *līvor* 'blue colour, blue spot; envy', Welsh *lliw* 'colour', Bret. *liou* 'mole, birthmark' and OHG *slēwa* (< **sloi̯H-u̯o-*) 'sloe'.

RASMUSSEN (1990/91 [1999]) delivers circumstantial evidence for the development of laryngeal "breaking" in Greek as assumed by FRANCIS (1970) and NORMIER (1977 and 1980). According to this theory, in which surprisingly few believe,[5] the sequences **-ih₂-*, **-uh₂-* and **-ih₃-*, **-uh₃-* develop regularly into Proto-Gk. **-jā-*, **-wā-*, **-jō-* and **-wō-* respectively. If the laryngeal in the PIE root **(s)lei̯H-* '(being) blue' is recognized as **h₃*, λωτός could be a participial derivation from this root, i.e. PIE **(s)lih₃-tó-s*, yielding Proto-Gk. **ljō-tó-s*. The alternative full-grade **sleh₃i̯-* would also yield Proto-Gk. **ljō-*, but Germanic forms like OHG *slēwa*, *slēha* (< **sloi̯h₃-u̯o-s*, **sloi̯h₃-h₁k̑ʷo-s*) regularly display the reverse order of glide and laryngeal (cf. RASMUSSEN 1989: 48f. on the principle).

It is remarkable that quite a few adjectival roots end in **h₃* or in a laryngeal of unknown colour, and many of them belong to the central parts of the vocabulary: **bʰleH(i̯)-* 'white, shining', **ĝʰelh₃-* 'yellow', **gʷei̯h₃-* 'alive, living', **preh₃-* 'first', **sal(H)-* 'grey, dirty', and **solH-* 'whole, entire'. Just like **(s)lei̯H-* they all form adjectives by adding the suffix **-u̯o-*. Maybe this suffix originates from a generalization of a glide **-u̯-* that appeared in hiatus in ordinary thematic adjective derivations of roots ending in **h₃*?[6]

5. The notion that a word for 'blue lotus' could become the general word for lotus is moreover supported by the fact that another generic name for water lilies, Middle Lat. *nenuphar*, is reshaped from a word for 'blue lotus' in Persian, namely *nīlūfar* from Skt. *nīlotpala-* 'blue

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[5] The counterexample most often adduced when rejecting the idea, Gk. -ωπῖπα 'watcher', can be explained by dissimilation of the labiovelar **h₃*: **opi-h₁kʷ-* (George Hinge, p.c.) or by tracing it back to **h₃k̑ʷih₁-pah₂-* 'feasting (lit. 'grazing') one's eyes' (cf. Germ. *Augenweide*; NORMIER 1980: 273).

[6] MARTINET (1953) suggested that **h₃* yielded **u̯* in the position before a vowel, except word-initially, without affecting the normal colouring and lengthening of a preceding vowel. With this rule he wanted to explain some of the verbal roots normally reconstructed with two variants, like **deh₃-* vs. **deh₃u̯-* 'give' (Lith. *dúoti* 'give' vs. *dãvė* '(s)he gave'), **gʷei̯h₃-* vs. **gʷih₃u̯-* 'live' (OCS *žiti* 'live' vs. *živǫ* 'I live'), Vedic perfect forms in *-au* such as *jajñau* (< **ĝe-ĝnoh₃ # V-*) and the Latin *v*-perfects, e.g. *(g)nōvī*.

lotus', composed of *nīla-* 'blue' and *utpala-* 'lotus'.[7] An exact parallel is Eng. *lilac*, Ar. *laylak* of both the colour and the flower in general, even though lilacs can be white or pink as well, just like lotus flowers. A form of reverse development, semantic narrowing, has taken place on the way from Skt. *utpalam* 'lotus' to Toch.A *oppal*, B *uppal* 'blue lotus' (D. RINGE, forthcoming article).

6. Skt. *nīla-* might reflect PIE **(s)lih₃-* too, assuming that it is dissimilated from older **lī-lá-*, an adjective derivation with the same suffix **-ló-* as in *śuk-lá-* 'white', *madhu-lá-* 'sweet' and *sthū-lá-* 'thick' (BURROW 1973: 148). The original Indo-Iranian variant could then be reflected in Hindi *līl* 'blue' (along with *nīl*) and Mod. Pers. *līlak, līlaj* (along with *nīlak, nīlaj*) 'indigo'.[8] Old Indic has no *l*-forms, but it seems highly probable that they existed in Proto-Indo-Iranian as they occur in both Indic and Iranian. The isolate language Burushaski in Northern India has also borrowed the *l*-form, *lilio*, which means 'violet' (HULD 1984: 88).

A parallel dissimilation occurs in Danish dialects spoken on the islands south of Funen where *lilje* 'lily' has become *nilje*, on the island of Tåsinge *nelle*. According to LANGE (1959-61), even (unspecified) German dialects show *nilge, nilje, nelje* for *Lilie* 'lily'. Moreover, in Danish children's language, I have observed *nille* for *lille* 'small' and *nilla* for *lilla* 'purple'.

The Greek name for the river Nile, Νεῖλος, has sometimes been interpreted as PIE **nei̯(H)-lo-s* 'the black one'[9] and linked to *nīla-*, among others. If a dissimilated form **nei̯h₃-ló-* < **lei̯h₃-ló-* existed already in PIE, this name could be the only full-grade formation of the root (except for the *o*-grades in Germanic). A dissimilation taking place while the laryngeal was still present would be quite parallel to ON *lykill* (< Proto-Gm. **lukilaz*) becoming e.g. Swed. *nyckla* and Dan. *nøgle*. If the dissimilation is purely Indic, it might have arisen first in dvandva compounds with liquids in the second member as well, such as *nīla-lohitá-* (cf. note 1) which would then in PIA have had the form of **līla-rodhitá-*. A form **līla-rodhirá-* with as many as four

[7] It is tempting to see Skt. *nīlambhoja-* 'blue lotus' (lit. 'blue water-born') reflected in Sinh. *neluṁbu* 'lotus', but the latter is actually a regular development from OI *naḷina-* 'rush, hydrophyte' (GEIGER 1961, TURNER 1966: 6639).

[8] The direct source of Arabic *līlaḥ, nīlaḥ* 'indigo'; from Arabic or Persian the *l*-form was brought to Europe, cf. Fr. *lilas* 'purple', Eng. *lilac* (recently, Arabic has re-borrowed the English word in the form *laylak*).

[9] 'The Blue Nile' is a recent name, given by the English to one of its tributaries to distinguish it from 'The White Nile'.

liquids can be imagined on the basis of PIA *lo:hila- which must be reconstructed to account for some forms in modern Indo-Aryan languages (TURNER 1966: 650). The dialectal confusion between *l* and *r* can have had an encouraging effect on dissimilation processes.

7. It is often stated that there was no basic term for 'blue' in PIE, as only four of its daughter languages, namely Germanic, Italic, Celtic, and Slavic, share such a term. In the light of the close Italo-Celtic connections the number should even be lowered to three.

However, another two of the important branches can be admitted to the group if we 1) recognize Skt. *nīla-* as a possible result of dissimilation, and if we 2) accept the overwhelming support for the theory of laryngeal "breaking" in Greek, which enables us to derive λωτός from a colour term, thus linking together the otherwise strongly divergent plants designated by this word.

By assuming that the laryngeal in **slei̯H-* is $*h_3$, another example can be added to the already strikingly large percentage of mainly adjectival roots ending in $*h_3$. Thematicizations of such roots are candidates for the origin of the suffix **-u̯o-*, while the background for the shape of the very roots must be searched for in a more distant past than the one that can be unearthed from the Indo-European relics alone.

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Abstract Formations with *-*tu*- and *-*ti*- in Old Irish and Indo-European[1]

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Introduction: *-*tu*- and *-*ti*- in PIE

It is a well-known fact that primary formations with the PIE abstract suffixes *-*ti*- and *-*tu*- are also well represented in Celtic. They are mentioned by the standard handbooks and dealt with in several important articles and scholarly works which provide valuable information about these formations. These conclusions, however, have been drawn from a limited corpus of clear examples. One can expect to refine our knowledge of these formations in Old Irish and Celtic on the basis of a more comprehensive collection of material.[2] The attempt to do this will be undertaken here.

The suffixes *-*ti*- und *-*tu*- are very similar with regard to form as well as function, and consequently previous research often examined them together. For the stage of IE, we can assume that both suffixes formed abstracts from verbal roots and inflected with mobile accent according to the proterokinetic paradigm as follows:

nom. sg.	**pér-tu-s* m.	**bʰér-ti-s* f.
gen. sg.	**pr̥-téu̯-s*	**bʰr̥-téi̯-s*

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[1] I would like to thank Dr. D. S. Wodtko for various suggestions and points of criticism. The remaining mistakes are of course my own. Reconstructed preforms contained in this article are to be interpreted as transpositions into PIE phonetic patterns if the preform cannot be postulated for PIE, cf. LÜHR (2000, 2).

[2] For complete collections of Old Irish *ti*- and *tu*-abstracts I refer to my dissertation *Abstrakta mit Dentalsuffixen im Altirischen* (IRSLINGER 2002). It also contains detailed discussions with full bibliographical references for the etymology of each word which could not be cited within the scope of an article.

This type of inflection is postulated on the basis of reconstruction.[3] The indirect evidence for it, however, is better in the case of *tu*-abstracts. In Old Indic, *tu*-formations are frequent, and normally they show the accented *e*-grade of the root, especially when forming infinitives from primary verbs, for example Ved. *gántu-* 'way, course' < *g^wém-tu-*. Here the ablaut of the root, which originally only appeared in the strong cases, was generalized throughout the paradigm. The fact that there are several cases where different ablaut variants were generalized in different branches of the IE language family is considered the most convincing evidence for the reconstruction of mobile paradigms.

Av. *pərətu-* 'passage', OHG, OS *furt*, *ford* < **pr̥-tú-* vs. ON *fiǫrðr* 'ford' < **pér-tu-*.

More difficult is the case of **-ti-*, where the zero grade of the root is attested almost without exception. There are a few forms that are taken as indications for a mobile paradigm as well:

> Goth. *anaminds** 'suspicion, supposition' < Proto-Germ. **-minþi-*
> cf. PIE **mén-ti-*
> Goth. *gamunds** 'remembrance, memory' < Proto-Germ. **-mundi-*
> cf. PIE **mn̥-téi̯-*

The choice of the ablaut grade which is generalized seems to be influenced by the structure of the root. So we frequently have full grade with roots of the structure *CeH* in Vedic, but also in other languages like Greek and Germanic, compare e.g.

> Ved. *á-sa-māti-* 'incomparable', Gk. *μῆτις* 'wisdom, skill, craft', OE *mǣþ* f. 'measure' < **méh_1-ti-*

Roots of the structure *CeC* often display *e*-grade, and the same goes for roots containing *ReC* in languages where the outcome of the

[3] PEDERSEN (1933, 21) was the first to reconstruct a proterokinetic paradigm for *ti*-formations.

e-grade would be very different from that of the zero grade, as in Germanic.

A salient feature of the distribution of *-*tu*- and *-*ti*- is the fact that in several languages *-*tu*- is more common in uncompounded words, while *ti*-formations appear as second elements in compounds, especially in Vedic and Greek. This fact is taken as the cause of the scarce attestation of full grades of the root in *ti*-formations. But as there are several good examples of uncompounded *ti*-abstracts,[4] I do not think we should assume composition or non-composition as a rule for the distribution in IE or at least late IE. A modification of this view is provided by Vine (this volume), drawing the attention to several good examples of *ti*-abstracts with *e*-grade of the root from which at least a part of the simplex words were created by decomposition.

But as the zero grade of the root is much more frequent for *ti*-formations throughout the IE languages, we might assume that the generalisation of this ablaut grade for *ti*-formations took place or started at least already during a late stage of IE, in contrast to the formations with *-*tu*- which rather seem to have a generalized *e*-grade. This state of affairs was subsequently more or less modified by processes working independently within the daughter languages (Rix 1992, 146; for further evidence of suffixal ablaut cf. Meier-Brügger 2000, 194f.).

The function of *-*tu*- and *-*ti*- was to form verbal abstracts, which are masculine in the case of *-*tu*- and feminine in the case of *-*ti*-. This explains the fact that in a variety of languages, *ti*- and *tu*-formations became productive in the creation of infinitives and supines. The formation of verbal abstracts is of course a very general function, which is exercised by many other suffixes as well, but I do not think we shall be able to describe the function of *-*ti*- and *-*tu*- with increasing precision, let alone to discover a difference between them. It is a common opinion that *-*tu*- forms *resultativa*, while *ti*-formations rather are *nomina actionis*. In my view, such statements normally underrate the question of different ages of attestation of the IE languages as well as the overall system of productive suffixes for the formation of verbal abstracts in a given language.

An excellent discussion of the question how the valency of the underlying verb may influence the semantic development of the abstract is provided by Panagl (1985, 217ff.). The verbal abstract represents

[4] See also the discussion by Liebert (1949, 149-171).

the content of a finite clause in a compressed way and normally does not demand the arguments required by the finite verb. They remain present, however, and may reappear when one of the arguments is topicalized. The affected argument may, for example, be expressed by the verbal abstract, as well as other local or instrumental arguments or the subject of the sentence. The degree of concretisation depends on the semantics of the substantive which is represented by the verbal abstract. If the substantive is a concrete object, the verbal abstract may be used like any other noun denoting concrete objects. Therefore the NHG *ung*-abstract *Lieferung* may be used to denote concrete merchandise. If it is not a concrete object, the verbal noun may develop only into a *resultativum*, as NHG *Erzählung* 'what has been told'. According to this then, it is rather the valency of the underlying verb than the semantics of the suffix which determines the meaning of the verbal abstract. This is supported by the OIr. material, as can be checked with the help of the formations presented here.

A completely different approach was recently undertaken by OLSEN/RASMUSSEN (1999), who explained **-tu-* and **-ti-* as unaccented allomorphs of a suffix consisting of **-tV-*, the accented variant of which was **-tó-*. This brings us back into the protolanguage and even beyond. Though many fascinating aspects could be discussed in relation to this hypothesis, I do not want to delve further into the prehistory of Indo-European, but move on to the Old Irish material, taking the above mentioned functions of the suffixes and the proterokinetic, though already partly reshaped paradigms as the probable IE background.

1. Formations with *-*tu*- in Old Irish

1.1. Formations with zero grade of the root

In my examination I included every word which might be explained as a *ti*- or *tu*-abstract. A decision was of course only possible if an etymology could be found. Only those formations, constituting about one third of the material, that have secure or probable IE etymologies are presented here. In some cases, two or even more etymologies were proposed for one word. I listed the one which seemed to me the most attractive, but I refer to the alternative ones in the notes, if necessary. 64 formations contain the suffix **-tu-*. The list of *ti*-formations, containing 23 items, is much shorter.

The majority of *tu*-formations - namely 35 - which are listed together with the underlying roots, displays zero grade of the root. About 17 formations have *e*-grade of the root. The rest of them are ambiguous. A quick survey of the material clearly shows the fact that the distribution of zero grade and *e*-grade of the root depends mostly on the structure of the root. Therefore the formations are arranged according to root types.

a) Roots containing *L*, but not in anlaut or after laryngeal: *CeL(C), CLeC*

OIr. *bricht 1* m. 'incantation, magic spell' < **bʰr̥ĝʰ-tu-*	**bʰreĝʰ* 'feierlich sprechen, dichten'[5]
OIr. *cris* m. 'belt' < **kr̥t-tu-*	**kert* 'binden' (LIV 317)
OIr. *cruth 1* m. 'form, shape' < **kʷr̥-tu-*	**kʷer* '(ab)schneiden, schnitzen' (LIV 350)
OIr. *grith 1* m.'shaking; agitation; shout' < **ĝr̥-tu-*	**ĝar* 'tönen, rufen' (LIV 142)
MIr. *gruth* m. 'curds, cheese' < **gʷʰr̥-tu-*	**gʷʰer* 'warm werden' (LIV 196)
OIr. *richt* m. 'form, shape, appearance' < **pr̥p-tu-*	**prep* 'in die Augen fallen' (LIV 443)
OIr. *-rith* 'ford' < **pr̥-tu-*	**per* 'durchqueren' (LIV 425)
MIr. *scris* m. 'scraping, tearing' < **skr̥dʰ-tu-*	*?*skerdʰ-* 'schneiden, stechen' (LIV 505)
OIr. *slis* 1 m. 'side, wall, edge, flank' < **spl̥t-tu-*	**(s)pelt* 'spalten' (LIV 525)
OIr. *tart* m. 'dryness, thirst' < **tars-tu-* < **tr̥s-tu-*	**ters* 'vertrocknen, durstig werden' (LIV 579)

[5] Root and etymology proposed by STOKES (Acall. Gloss.), cf. LEIA B-89, EWAia II 236f.

b) Root containing two resonants: *HNeLC*

OIr. *mlicht* 'milking, yield of milk' < *$h_2$ml̥ĝ-tu-	*$h_2$melĝ 'melken' (LIV 249)

c) Roots containing a liquid and a semivowel: *CeLU̯(C), CLeU̯(C)*

OIr. *bruth 1* n.[6] > m. 'heat; anger; a brewing' < *b^hru-tu-	*b^heru̯ 'sieden, wallen' (LIV (LIV 65)
OIr. *drúcht* m. 'dew' < *d^hrūb-tu-[7]	?*d^hreu̯b 'tropfen' (LIV 137)
OIr. *lucht* m. 'contents, charge; people' < *lug-tu-	*leu̯g 'lösen, brechen' (LIV 373)
OIr. *lus 1* m. 'plant, herb, vegetable' < *$h_1$lud^h-tu-	*$h_1$leu̯d^h 'steigen, wachsen' LIV 221)
OIr. *lius* m. 'loathing' < *$h_2$lit-tu-	*$h_2$lei̯t 'commit a crime' (IEW 672)[8]
MIr. *rucht 1* 'tunic' < Proto-Ir. < *ruχ-tu-[9]	
MIr. *rucht 3* 'pig' < *$h_3$ruk-tu-	*$h_3$reu̯k '(aus)graben, (aus)rupfen' (LIV 272)
MIr. *rus* 'face, cheeks; blush' < *rud^h-tu-	*reu̯d^h- 'rot machen' (LIV 460)
OIr. *slicht* m. 'mark, track, trace' < *slig-tu-	*slei̯ĝ 'schmieren, glattmachen' (LIV 515)

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[6] Old Irish possesses several neuter *tu*-formations the gender of which is, of course, an innovation. In most cases the influence of the corresponding *to*-adjective may have played a role. That original *to*-adjectives were inflected as *u*-stems, as suggested by DE BERNARDO STEMPEL (1999, 288), is possible, but it cannot be deduced from the ablaut grade of the root, as the latter depends on the root structure.

[7] The long *-ū- is unexplained.

[8] For the reconstruction of the root, cf. BEEKES (1969, 40).

[9] No underlying verbal root has been proposed so far. POKORNY (IEW 874) compares MW *rhuch(en)*, OE *rocc* 'mantle', which point to a root structure *(H)ReU̯C.

OIr. _sruth_ n. > m. 'stream, river' < _*sru-tu-_	_*sreu̯_ 'fließen, strömen' (LIV 535)
OIr. _-sruth_ m. 'scattering, bursting out' < _*stru-tu-_	_*streu̯-_ 'streuen' (LIV 550)

d) Roots containing a semivowel in in- or auslaut _CeU(C) / CU̯eC_

MIr. _cith 1_ m. 'shower' < _*k̂i-tu-_	_?*k̂ei̯_ 'fallen' (LIV 285)
OIr. _fi(u)s 1_ m. 'finding out; knowledge' < _*u̯id-tu-_	_*u̯eid_ 'erblicken' (LIV 606)
OIr. _gus 1_ m. 'force, vigour' < _*ĝus-tu-_[10]	_*ĝeu̯s_ 'kosten' (LIV 147)
MIr. _icht 2_ m. 'deed, action, stroke' (?) < _*pik̂-tu-_[11]	_*pei̯k̂_ 'heraushauen, -schneiden' (LIV 419f.)
MIr. _suth 2_ 'milk' < _*su-tu-_	_?*seu̯_ 'auspressen' (LIV 486)
OIr. _tucht_ m. 'form, shape, manner' < _*tuχ-tu-_	_*tu̯ek_ 'sichtbar sein' (LIV 595)

e) Roots containing a semivowel and a laryngeal _CeU̯H_

Ir. _críth_ 'purchase' < _*k_^{w}_rih_$_2$_-tu-_	_*k_^{w}_rei̯h_$_2$ 'eintauschen' (LIV 335)
OIr. _íth 1_ 'fat, lard, grease' < _*piH-tu-_	_*peH_ 'anschwellen' (LIV 419)
OIr. _níth_ m. 'fighting, conflict' < _*niH-tu-_	_*nei̯H_ 'führen, leiten' (LIV 406)
<u>no laryngeal reflex</u>	
OIr. _bith 1_ m. 'world' < _*g_^{w}_i-tu-_	_*g_^{w}_i̯eh_$_3$ 'leben' (LIV 192)
OIr. _guth_ m. 'voice, sound, word' < _*ĝ_^{h}_u-tu-_	_*ĝ_^{h}_u̯eH-_ 'rufen' (LIV 160)

[10] With _st_-suffix according to SCHRIJVER (1995, 411).

[11] Etymology proposed by Stefan SCHUMACHER (p.c.).

OIr. *ruth 2* m. 'the act of overthrowing' < **ru-tu-*	**reuH-* 'aufreißen' (LIV 461)
OIr. *suth 1* n.? > m. 'fruit, produce, offspring' < **su-tu-?*	**seuH* 'gebären' (LIV 487)

In the above sections we have zero grade formations from roots containing

a) one liquid (there are only examples with *r*), but not in anlaut or in anlaut after laryngeal. Here the liquid is vocalized, normally as *ri,* but there are exceptions such as *cruth* 'form' and *gruth* 'curds', where one might suppose rounding by the preceding labiovelar, and *tart* 'thirst', where one finds the regular development of syllabic *r* before *s*.

b) A variation of this root-type is constituted by roots with two resonants, but only one vocalized, viz. syllabic **l̥* that appears as *li*. OIr. *mlicht* 'milking, yield of milk' is the only example.

c) In these formations from roots containing a liquid followed by a semivowel it is the semivowel which is vocalized.

d) Roots underlying these formations contain one semivowel, which is vocalized, in inlaut or auslaut.

e) This section contains roots ending in a semivowel followed by a laryngeal. Normally this group appears as long *ī* / long *ū* in Old Irish, compare *críth* 'purchase' etc. There are two cases, however, that show no reflex of the laryngeal, *bith* 'world' and *suth* 'fruit, produce'. While *suth* has no Celtic cognates, we can safely reconstruct **gʷi-tu-* for Celtic, cf. Gaul. *bituriges* 'kings of the world', MW *byd* m., OBret. *bit* m., OCorn. *bit*, MCorn. *bys*, *beys* 'world'. Several roots - including the two mentioned - of the structure *CeiH* / *CeuH* have no reflex of the laryngeal in a number of IE languages, compare e.g. the words for 'son': Ved. *sūnú-* 'son', Lith. *sūnùs*, OCSl. *synъ* may be reconstructed as **suH-nú-*, while Goth. *sunus*, OHG *son,* ON *sunr* point to **su-nu-*.

In the past several explanations have been proposed for this phenomenon: analogical reshaping on the basis of forms which had lost the laryngal regularly before a vowel or by dissimilation. Additional influence on *bith* 'world' could have been exerted by the *uo*-Adjective

*g^wi-u̯o- > OIr. *béo* 'living' (HAMP 1976, 88f.). Loss due to dissimilation is assumed by MCCONE (1997, 173) in sequences with *e*-grade before *a/ā*, i.e. *(-)ei̯aCa/ā- > *(-)ei̯Ca/ā-. Though not immediately relevant for the zero grade formations in question, they may nevertheless have helped to establish the roots as *aniṭ*.

KORTLANDT (1981) and SCHRIJVER (1991, 525ff.) assume that the accent played a role in the development of the sequences *uH, *iH, while the problem does not turn up at all if, for certain roots, a different structure is postulated, compare e.g. SCHRIJVER (1991, 526) who reconstructs *g^weh_3i̯ 'to live'. Whatever explanation may be correct, I do not want to discuss this problem further in the present context. But one fact to bear in mind is that about 90 percent of the *Cei̯H*-roots has a nasal present - a context, in which short *i* easily arises.

1.2. *tu*-formations with *e*-grade of the root

Three root types may be distinguished:

a) Roots with laryngeal (+ semivowel) in auslaut	***(C)CeH(i̯)***
OIr. *áth* m. 'ford, open space' < *i̯eh_2-tu-	*i̯eh_2 'dahinziehen, fahren' LIV 275)
OIr. *bláth* m. 'flower, blossom' < *b^hleh_3-tu-[12]	*b^hleh_3 'blühen' (LIV 72)
OIr. *díth* n. > m. 'loss, destruction' < *d^heh_1-tu-)	*d^heh_1 'hinschwinden' (IEW 239)
OIr. *fáth* m. 'cause; prophecy; composition' < *u̯eh_2-tu-	*u̯eh_2 'erregt, begeistert sein'[13]

[12] An alternative reconstruction as *b^hl̥h_3-tu- is possible, compare the listing and discussion under 2.1.

[13] OIr. *fáth* has cognates in MW *gwawd* m./f. 'poem, eulogy; lampoon' and ON *óðr*, GS *oðar* m. *u* 'ecstasy; poetry, poem' which may be reconstructed as Proto-Germ. *u̯ōðu-, GS *u̯ōðau̯z. The underlying root *u̯eh_2 'being excited, enthusiastic' is also found in Ved. *vāṇá-* m. 'voice, music', *vā́ṇī-* f. 'voice, singing' (etymology proposed by SCHAFFNER 2001, 321ff.). The Vedic material shows that the dental in *fáth* etc. belongs to the suffix, not to the root, as POKORNY (IEW 1113) and LÜHR (2000, 23) assume.

OIr. *líth* m. 'festival, feast-day' < *pleh$_1$-tu-	*pleh$_1$ 'sich füllen, voll werden' (LIV 434)
OIr. *saeth* m. 'trouble, hardship, tribulation' < *seh$_2$i̯-tu-	*seh$_2$(i̯) 'toben, wüten' (LIV 472)

b) Roots containing two stops and/or *s* — ***CeC(C), Ces***

MIr. *ces 1* 'weakness, illness' < *k̂es-tu-	*k̂es 'schneiden' (LIV 293)
MIr. *sess* m. 'bench of a boat, beam' < *sed-tu-	*sed 'sich setzen' (LIV 465)
OIr. *tess 2* m. 'heat' < *teps-tu-	*teps 'heiß sein'

c) Roots containing *U*, *R* or *H* + *R* in anlaut — ***(H)ReC, NeC, U̯eC***

MIr. *es(s) 3* m. 'cataract, rapid' < *i̯es-tu-	*i̯es 'sieden, schäumen' (LIV 277)
OIr. *lecht* m. 'grave, burial, dead' < *leg-tu-	*leg 'tröpfeln' (LIV 356)[14]
OIr. *les 1* 'remedy; advantage, benefit' < *h$_2$leks-tu-	*h$_2$leks 'abwehren, schützen' (LIV 248)
OIr. *mes(s) 1* m.'judgement, judging' < *med-tu-	*med 'messen, für Einhaltung sorgen'(LIV 380)
MIr. *mes(s) 2* m. 'tree-fruit, mast' *med-tu-	*med 'voll werden, satt werden' (LIV 380)
OIr. *recht 1* m. 'law' < *h$_3$reĝ-tu-	*h$_3$reĝ 'gerade richten, ausstrecken' (LIV 270)
MIr. *recht 2* m.'paroxysm, outburst' < *reb^h-tu-	*reb^h 'sich (heftig) bewegen' (LIV 448)
OIr. *-res* 'act of running, a run, course' < *ret-tu-	*ret 'laufen' (LIV 459)

[14] A derivation from *leg^h 'sich (hin)legen' (LIV 357f.) cannot be excluded.

In section a) we find roots with a laryngal or, if one is willing to assume such structures, a laryngeal followed by consonantal *i̯* in auslaut. The structure of the roots under b) and c) we may summarize as *CeC* and *ReC*, whereby several options for stop and resonant are possible: The consonant may be the sibilant *s*, compare *sess* 'beam' from **sed-tu-*, or the consonant may be preceded or followed by *s*, for example *les 1* 'remedy' from **$h_2$leks-tu-*.

The material in c) shows that the first element of the root may also be a semivowel, a resonant or a resonant preceded by a laryngeal, cf. *es(s) 3* m. 'cataract, rapid' < **i̯es-tu-*, *-res* 'act of running, a run, course' < **ret-tu-*, *recht 1* m. 'law' < **$h_3$reĝ-tu-*. In this case the resonants and semivowels are never vocalized but treated as ordinary consonants while the root has *e*-grade.

Before discussing the rest of the material the following conclusions may already be drawn:

As *tu*-formations in Irish are more than twice as numerous as *ti*-formations and as they often have cognates in other Celtic languages, we may assume that during some part of the Proto-Celtic period *-*tu*- took over the function of *-*ti*- as a suffix for the formation of verbal abstracts. This assumption is strengthened by the fact that in several other IE languages we find *ti*-formations of roots which in Celtic have the suffix *-*tu*-, compare the following examples mainly from Indo-Iranian:

Ved. *sū́ti-* f.'birth'	OIr. *suth* < **su-tu-*
OInd. *vitti-* 'consciousness' Ved. *á-vitti-* f. 'das Nichtfinden'	OIr. *fius* < **u̯id-tu-,* lat. *vīsus* 'act of seeing; sight'
OInd. *ní-ṣatti-* 'act of sitting down, sitting'	OIr. *sess* < **sed-tu-*
Av. *-uruxti-* f. 'Nichtbrechen (des Gelübdes)'	OIr. *lucht* < **lug-tu-*
Ved. *júṣṭi-* f. 'love, service, favour, satisfaction' Goth. *ga-kusts* 'test'	OIr. *gus* < **ĝus-tu-*
Ved. *kr̥ti-* f. 'act of doing, making, performing'	OIr. *cruth* < *k^w*r̥-tu-*
OInd. *á-kr̥ti-* f. 'form, figure, shape' Av. *ākərəti-* 'Beschaffung'	

The list is by no means exhaustive. It should be emphasized here that the reconstructs given as preforms of the Irish words cannot be assumed with absolute certainty to be PIE in this case, they are merely transpositions. The same is true for the other zero grade *tu*-formations I have presented so far.

But the *tu*-formations did not simply replace the *ti*-formations, they also became assimilated to them, partly by taking over their characteristic form, the zero grade of the root. Almost without exception, roots of the structures mentioned under 1.1. a) to e) took part in this process, which was also supported by the fact that the outcome of the zero grade in Celtic was identical for dental formations of roots of the structures *CeRC*, *CReC*, and *CeR*. In Celtic we always find *CRi°*. In addition to this, the vocalization rules for roots containing semivowels or liquids plus semivowel worked in such a way that we find *i* or *u* as vowels, so that the introduction of the zero grade leads to greater homogenity within the root-structure of *tu*-formations. Zero grade formations from *aniṭ*-variants, though problematical from an IE point of view, fit very neatly into the Celtic structure.

An *e*-grade of the root was maintained for roots which were inconvenient for forming zero grades - an observation which is, of course, trivial. However, the behaviour of those roots for which we could imagine alternative possibilities is interesting: Roots of the structure *(H)ReC* display full grade, though for example a hypothetical †*richt* from zero grade *$r̥b^h$-tu-*, instead of the attested *recht* 'paroxysm, outburst' from *e*-grade **reb^h-tu-*, should not present a problem, at least not in Old Irish. May we therefore conclude that reshaping of *tu*-formations took part during a very early period of Celtic, when the structures *(H)ReC*, *CeH* and *CeC* were still recognizable and therefore parallel?

1.3. *tu*-formations from *CeRH*-roots ***CeRH***
Roots containing a resonant, followed by laryngeal

OIr. *bráth* m. '(last) judgement, doomsday' < **g^wr̥H-tu-*?	**g^werH* 'begrüßen, ehren' (LIV 188)
OIr. *tráth* n. > m. 'period of time, hour, day' < **tr̥h_2-tu-*?	**terh_2* 'durchkommen, überqueren' (LIV 575)

OIr. *bráth* and *tráth* are two formations from roots containing a resonant, followed by a laryngeal. Whether they are to be considered as *e*- or zero grade formations depends mainly on the position taken in the ongoing discussion about the regular outcome of the sequence *CR̥HC* in Celtic. MCCONE (1996, 52f.), followed by several scholars, considers long *ā* the normal representation, the formations with short *ă*, like *flaith* 'sovereignty' e.g., being due to analogical reshaping. If this interpretation is correct, one could postulate that these roots were treated like other roots containing liquids under 1.1.a), except for the fact that the resonant was vocalized differently before laryngeal and before other consonants, i.e. as *Ra* instead of *Ri*, and subsequently lengthened by the following laryngeal. Together with the representation of **R̥* as *aR* before *n* this gives three different representations of PIE **R̥* in OIr.

SCHRIJVER (1995, 190) proposed a different development: short *ă* is the normal outcome of *CR̥H* before obstruent, while formations like *bráth* 'judgement' and *tráth* 'period of time' would contain a full grade II **bréh$_2$-tu-*, **tréh$_2$-tu-*. If one is prepared to accept schwebeablaut, which is a question of its own, this hypothesis works well in so far as the *CeRH*-roots would change their structure into the *CeH*-type mentioned under 1.2.a) where one expects *e*-grade.[15] SCHRIJVER's argumentation seems especially convincing if one does not postulate that it was necessarily the resonant which was vocalized within the sequence *CRHC*.[16] Alternatively one could argue that *RH* developed as a cluster or that the preform one gets on the basis of the Celtic material is indeed **CRH̥C*, possibly due to a shift of the syllablic peak. The latter possibility was already considered by PEDERSEN (VGK I, 178f.). According to SCHRIJVER's hypothesis all instances of OIr. -*ă*- in the present collection would go back to PIE **H* quite straightforwardly, and all instances of OIr. -*ā*- to PIE **-eH-*. If OIr. *líth* m. 'festival, feast-day' (cf. 1.2.a) actually belongs to **pleh$_1$* 'sich füllen,

[15] Compare also the material for **CeH-to-* and **CeH-ti-* presented by VINE (this volume).

[16] For arguments in favour of PIE **CR̥HC* compare MAYRHOFER (1986, 123). SCHRIJVER (1991, 9ff.) points out that the syllabification of resonants and laryngeals is language specific and cannot be predicted on the basis of preforms reconstructed for PIE.

voll werden' (LIV 434),[17] the only possible preform is *$pleh_1$-*tu*- with *e*-grade.

The same is true for the *ti*-formations OIr. *laith 1* 'ale, liquor' and OIr. *maith* (adj.) 'good' (2.2.a), if they can be reconstructed as *$l\underset{\circ}{h}_2$-*ti*- and *$m\underset{\circ}{h}_2$-*ti*-. It may be argued that these preforms resulted from *$\underset{\circ}{l}h_2$-*ti*- and *$\underset{\circ}{m}h_2$-*ti*-, also with shift of the syllabic peak. BEEKES (1988, 23), however, adduces convincing material for the assumption that within the cluster *#RHC*, with *R* (as well as *N* and *U*) in absolute anlaut, it is always the laryngeal which is vocalized. However, it is not mentioned by BEEKES that if there is a morphological boundary within this cluster, underlying roots may have the structure *ReH* oder *ReHC*. Our material does not contain any examples of the latter type, but it was possible to show that *ReC*, *NeC* and *$\underset{\circ}{U}$eC* behave like *CeC*. If **R* gives up its status as a resonant in this position, it is not surprising that it is the laryngeal which is vocalized. Thus the group *#RHC* cannot be paralleled with *C$\underset{\circ}{R}$HC*. What is more difficult is the fact that according to the tendencies outlined above and additionally confirmed by non-Celtic material as adduced by VINE, we should rather expect full grade formations *leh_2-*ti*-, *meh_2-*ti*- from this root type.

An ambiguous case is OIr. *bláth* m. 'flower, blossom' < *$b^h leh_3$-*tu*-, which could alternatively be traced back to a zero grade *$b^h \underset{\circ}{l}h_3$-*tu*- if one assumes *$C\underset{\circ}{R}HC$ > *$CR\bar{a}C$.

As reference to root structure provides arguments for both sides, the present examination cannot give any hints for a final decision of this question. MCCONE's hypothesis seems to be the more economical one from an overall point of view which cannot be discussed here,[18] so the above mentioned formations *bráth* and *tráth* were listed as zero grade, but this classification is open to debate.

1.4. *tu*-formations from roots containing a nasal

The behaviour of roots containing a nasal or nasal plus consonant in auslaut is inconclusive. The outcome of *e*- and zero grade is identical in OIr., long *é* appearing in both cases. A decision is only possible on the basis of British or Gaulish cognates, where *e*- and zero grade are

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[17] Etymology proposed by THURNEYSEN (1900, 20f.).

[18] The main points in favour of it are that no full grades II are required and that no full grade or analogical reshaping has to be assumed for *to*-adjectives like OIr. *gnáth* '(known), usual' < *$\hat{g}\underset{\circ}{n}h_3$-*tó*-.

represented as *-_in_- and *-_an_- respectively. There is one example for a _tu_-formation with _e_-grade, OIr. _cét_- 'first', as seen in MW _cyn_- 'earlier' etc., MCorn. _kens_, OBret. _cint_ 'before', Gaul. _Cintu_-, _cintuxo_- (La Graufesenque) and one with zero grade, compare OIr. _tét_ 'cord' versus OW _tantou_ gl. fides. The other OIr. formations remain ambiguous, because we lack secure cognates.

Roots containing _N_ (+ _C_) in auslaut	**_CeN(C)_**
_e_-grade	
OIr. _cét- 1_ 'first, primary, former' < *_ken-tu-_	*_ken_ 'entspringen, beginnen' (LIV 314)
zero grade	
OIr. _tét 1_ 'rope, cord' < *_tn̥-tu-_	*_ten_ 'sich spannen, sich dehnen' (LIV 569)
ambiguous	
OIr. _bés 1_ m. 'habit, custom' < *b^hend^h-_tu-_/*$b^hn̥d^h$-_tu-_	*b^hend^h 'binden' (LIV 60)
MIr. _bét_ m. 'deed of violence; calamity' < *g^wem-_tu-_/*$g^wm̥$-_tu-_	*g^wem '(wohin) gehen, kommen' (LIV 187)
OIr. _cécht 1_ 'ploughbeam; part of a plough' < *_k̂enk-tu-_/*_k̂n̥k-tu-_	*_k̂enk_ 'in der Schwebe sein, hängen' (LIV 290)
OIr. -_ét_ *'act of taking' < *h_1em-_tu-_ / *$h_1m̥$-_tu-_	*h_1em 'nehmen' (LIV 209)
OIr. _lés_ 'light (of the day), radiance' < *_(s)plend-tu-_/ *_(s)pln̥d-tu-_	?*_splend_ 'glänzen, hell sein / werden' (LIV 530)

2. _ti_-formations

Formations containing the suffix *-_ti_- are arranged according to root types as above.

2.1. *ti*-formations with zero grade of the root

a) Roots containing *L*, but not in anlaut/after *H*	***CeL(C), CLeC***[19]
OIr. *ailt 3* f. 'height' < **h_2l̥-ti-*[20]	**$h_2$el* 'nähren, aufziehen' (LIV 23)
b) Roots containing a liquid and a semivowel	***CeLu̯(C), CLeu̯(C)***
MIr. *clith* (adj.) 'concealing, protective' < **k̂l̥-ti-*	**k̂el-* 'warm werden' (LIV 287)
OIr. *mlicht 2* (adj.) 'milch, in milk' < **$h_2$ml̥ĝ-ti-*	**$h_2$melĝ-* 'melken' (LIV 249)
c) Roots containing a semivowel and a laryngeal	***CeU̯H, CU̯eH***
<u>no laryngeal reflex</u>	
OIr. *buith 1* f. 'being, existing' < **bu-ti-*	**b^hu̯eh_2* 'wachsen, entstehen, werden' (LIV 83)
d) Roots containing a semivowel in in- or auslaut	***CeU̯(C), CU̯eC***
OIr. *-cuis* 'motive, impulse' < **(s)kud-ti-*	**(s)keu̯d* 'vorantreiben' (LIV 507)

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[19] It is a wellknown fact that OIr. *brith* f. 'act of carrying, bearing; judging', *cleth 2* 'act of hiding, concealing', *gleth* 'feeding, grazing' and *mleth* 'grinding' belong together with other verbal nouns to a special type of inflection which, in the singular, is identical with that of the *i*-stems save the genitive in *-e* (GOI § 294b). On the basis of the MW formations *bryt* (m.) 'mind, desire, will, aim', *clyt* 'shelter' and their corresponding compounds some scholars reconstructed original *ti*-stems **b^hr̥-ti-*, **k̂li-ti-*, which would underly the OIr. material as well (cp. SCHMIDT 1972, 45ff.). SCHUMACHER (2000, 70f.), following BREATNACH (1997, 53), argues that several instances of nom. sg. *breth* in Wb. rather point to **bri-tā* as the preform of the OIr. words. The nom. sg. *brith* would be the dative case, used as a nominative. According to BREATNACH, this form would contain a 'false' vowel, resulting from the breakdown of the original distribution of *i* and *e*. This view is to be preferred over SCHMIDT'S, whose main argument consists in the fact that **b^hr̥-tí-* is continued in several languages. This argument is not very strong, however, with regard to the extremely frequent replacement of IE *ti*-abstracts by *tu*- and *tā*-formations which can be observed in Celtic, cf. IRSLINGER (2002, 390).

[20] For the development of **h_2R̥C* compare MCCONE (1996, 52).

MIr. *duis* 'Badb, scald-crow' < **dus-ti-*	**deu̯s* 'bedürfen, ermangeln' (LIV 107)
MIr. *ficht* (adj.) 'sharp, pointed' < **u̯ik-ti-*	**u̯ei̯k* 'überwinden, besiegen' (LIV 611)
MIr. *ruis* f. 'elder-tree' < **rud*^{h}*-ti-*	**reu̯d*^{h}- 'rot machen' (LIV 460)
e) Root containing a laryngeal in inlaut	***CeHC***
MIr. *cais 1* 'hatred; love' < *$\hat{k}h_2d$*-ti-*	*$\hat{k}eh_2d$ 'seelisch aufgewühlt sein' (LIV 283)
f) Roots with resonant in anlaut and laryngeal in auslaut	***ReH***
OIr. *laith 1* 'ale, liquor' < **lh̥*$_2$*-ti-*	*leh_2 'gießen' (LIV 360)
OIr. *maith* (adj.) 'good' < **mh̥*$_2$*-ti-*	*meh_2 'zeitlich recht/passend sein, rechtzeitig sein'[21]

The root type under e) has not turned up so far: *cais* 'love, hatred' may be a *ti*-formation of *$\hat{k}eh_2d$, a root of the structure *CeHC*, which shows zero grade.

The formations in section f) represent a point of interest: if *laith* 'ale, liquor' and *maith* 'good' are correctly analyzed they would go back to zero grade formations of roots ending in laryngeal (compare the discussion above, 1.2.). As demonstrated above, such roots show *e*-grade when suffixed with *-*tu*-. One may argue that the *tu*-formations remained with their original *e*-grade, while for *ti*-formations the pressure was stronger, even for the *CeH*-type, to adapt to the new form of *ti*-abstracts which had changed to zero grade in the root.

Nevertheless we cannot be sure to find a uniform development here, as suggested by the formation *áith* 'drying-kiln' (see below, 2.2.a) which may show *e*-grade (see below, 2.2.a). It is not quite conclusive, however, because *áith* may be analyzed as a *ti*-formation from the root *h_2eh_1 'to be hot'. But as it is the only root containing two laryngeals - and only two laryngeals, one cannot be absolutely sure

[21] Cf. EICHNER (1973, 63ff.).

about its behaviour with regard to ablaut. A development comparable to *CeC*-roots would seem natural, though.

2.2. *ti*-formations with *e*-grade of the root

a) Roots with laryngeal (+ semivowel) in auslaut	***CeH(i̯)***
OIr. *áith* 'drying-kiln, four' f. < **h$_2$eh$_1$-ti-*	**h$_2$eh$_1$* 'heiß sein' (LIV 229)
?OIr. **fáith* 'excitement, ecstasy' < **u̯eh$_2$-ti*	**u̯eh$_2$* 'to be excited, to be enthusiastic'
OIr. *táid* m., *nt* 'thief' ← **tah$_2$-ti-*	**teh$_2$* 'stehlen' (LIV 559)
b) Roots containing a semivowel in anlaut	***U̯eC***
MIr. *icht 3* 'race, people; district' < < **i̯ek-tV-*	**i̯ek* 'sprechen' (LIV 276)
c) *e*-grade of the root; formation from *aniṭ*-variant	***CeU̯(H)***
OIr. *féith 1* f. 'fibre, sinew' < **u̯ei̯-ti-*	**u̯ei̯* 'umwickeln, umhüllen' LIV 610)
OIr. *tréith* (adj.) 'weak, cowardly' < **trei̯-ti-*	**trei̯H* 'bohren, reiben'

In the past, some scholars have considered OIr. *fáith* m. *i* 'seer, prophet' a *ti*-formation.[22] Indeed, this word might conveniently be explained as the *ti*-derivative of **u̯eh$_2$* 'to be excited, to be enthusiastic' which already appeared as the basis of *fáth* 'reason' above. Another interpretation of this form has recently been proposed by Stefan SCHAFFNER: *fáith*, like Lat. *vātēs*, may be traced back to the hysterokinetic formation **u̯ah$_2$-téi̯-* 'he, who has inspiration / ecstasy'. This **u̯ah$_2$-téi̯-* was derived by internal derivation from an original *ti*-abtract with proterokinetic inflection, **u̯áh$_2$-ti-* 'ecstasy, excitement'. This explanation, which would account for the unusual masculine gen-

[22] Cf. WAGNER (1970, 55). His explanation from a root **u̯ā-* 'to weave' has to be rejected, because this root is a secondary creation of Old Indic (EWAia II 538, I 276).

der of the Irish word, presupposes the existence of a formation with *e*-grade, which remains highly speculative, however. According to WATKINS (1995), *fáith* should be analyzed as **u̯ōt-i-*, a formation with long *ō*-grade of **u̯et* 'vertraut sein mit', and therefore it would not belong here at all.

OIr. *táid* probably continued an original action noun **tah₂-ti-* 'act of stealing' which was used as an agent noun and secondarily inflected as an *nt*-stem, except in the nom.sg. This form probably has to be explained as a reshaping of an original form †*táith* under the influence of masculine agent nouns in *-(a)id*, also inflecting as *i*-stems.

On MIr. *icht 3* 'race, people; district' which is a perfect cognate of OHG *jiht*, *bijiht* 'confession, praise' see SCHRIJVER (1995, 106f.) and IRSLINGER (2002, 205f, 230).

Under 2.1.c) we find some striking examples: *féith* 'fibre, sinew' and the adjective *tréith* 'weak, cowardly'. The latter can be compared with MIr. *tríath* (adj.) 'feeble' and Lat. *trītum*. As the attestation of MIr. *tríath* (adj.) 'feeble' is late and scanty, this adjective may rather be explained as a secondary derivation of *tréith* than reconstructed as **trei̯-to-*. Lat. *trītum*, however, points to **triH-tó-*, the *to*-adjective of the root **trei̯H*, which is not continued in primary verbal formations (LIV 575 sub **terh₁*, note 4).

If the etymologies are correct, *féith* and *tréith* belong to roots of the structure *Cei̯H*, from which one would expect formations with zero grade, i.e. long *ī*, or formations with zero grade from the *aniṭ* variant at the very least, i.e. short *i*.

For *féith* at least we might assume that an *e*-grade formation with a dental suffix, **u̯ei(H)-t(V)-* existed already in IE. With regard to root ablaut, however, the material is not homogenous, cf.:

— *seṭ* or *aniṭ*, *e*-grade: Ved. *vetasá-* 'Calamus rotang, name of a reed-like plant', Av. *vaēiti-* f. 'willow, twig'
— ambiguous, **-ei̯-* or **-iH-*: Lat. *vītis* 'vine, tendril', OHG *wīda* 'willow', OCSl. *pa-vitь* 'tendril, twig'
— *seṭ*, zero grade: Lith. *výtis* 'willow, twig, barrel hoop', Gk. ἰτέα (f.) 'willow'; OIr. *fíthe* 'woven, plaited, fenced' < **u̯iH-ti̯o-*
— *aniṭ*, zero grade: Gk. ἴτυς, Aeol. ϝίτυς (f.) 'wheel rim, rim of shield'

Apparently one has to postulate parallel formations with *e*- and zero grade of the root already for IE, the laryngeal disappearing according

to the sound laws working in each language branch. In this case, *féith* could be regarded as an attestation of a *ti*-formation still displaying an *e*-grade which was not reshaped to zero grade in spite of its root structure, probably because the meaning was already concretisized and the connection to the verbal forms was lost. *féith* would therefore be a considerable archaism. Support for this assumption comes from OIr. *fíthe* 'woven, plaited, fenced' from **u̯iH-ti̯o-*, the *ti̯o*-participle, which shows the zero grade we expect. But one should bear in mind that in Celtic the picture is as diversified as in PIE, as there are several British formations, pointing to **u̯i-*: MW *gwden*, Corn. *gusen* next to *gwyden* f. 'withe' (cf. HAMP 1974, 201ff. for Breton material going back to **u̯ǐtt-*). PLATH (1994, 336) solves this problem by reconstructing two different roots **u̯ei̯* and **u̯ei̯H*, both meaning 'bend, plait'.

2.3. *ti*-formations from *CeRH*-roots

The root ablaut of this type is discussed under 1.3. above.

Roots containing a resonant, followed by laryngeal	***CeRH***
OIr. *flaith 1* f. 'lordship, sovereignty' < **u̯l̥H-ti-*[23]?	**u̯elH* 'stark sein, Gewalt haben' (LIV 617)
OIr. *mláith* (adj.) 'smooth, soft' < **ml̥*h_2*-ti-*?	**mel*h_2 'zerreiben, mahlen' LIV 388)
OIr. *ráith* (adj.) 'earthen rampart' < ***h_2*r̥*h_3*-ti-*?	***h_2*er*h_3 'aufbrechen, pflügen' LIV 243)
OIr. *tláith* (adj.) 'weak, soft, feeble' < **tl̥*h_2*-ti-*?	**tel*h_2 'aufheben, auf sich nehmen' (LIV 565)

3. Suffix **-ti-* or **-tu-*

There is a small group of words, which have a PIE etymology and are formed with a dental suffix, but there are not enough inflected forms attested to decide whether they are *ti-* or *tu*-formations. For OIr. *sith-* 'long', which only appears as first member of compounds, shortening from **sītV-* < **seh*$_1$*i̯-tV-* in pretonic position might be assumed with RASMUSSEN (1989, 59). Though a *ti*-formation cannot be excluded, the

[23] Cf. 1.3. above for the unexpected vowel quantity of *flaith*.

suffixation with *-*tu*- is more probable with regard to its greater productivity.

According to attested case forms, OIr. *crécht* may be a *tu*- or a *ti*-abstract, the feminine gender of the word in Mod.Ir. and of the Brit. cognates MW *creith* f. 'scar, wound' etc. poining to the latter. The Welsh word cannot be reconstructed as a *ti*-abstract, however, because of the lack of *i*-infection. As formations with different dental suffixes in Ir. and Brit. cannot be excluded, Brit. cannot be used as testimony with regard to the root ablaut of OIr. *crécht*.

zero grade	***CeHC, CeLC, ReU̯C***
MIr. *cacht* 'bondage, captivity' < *kh_2p-tV-	*keh_2p 'fassen, schnappen' (LIV 307)
MIr. *rucht 2* 'cry, noise' < **rug-tV-*	**reu̯g* 'rülpsen, erbrechen' (LIV 461)
	CeH(i̯)
OIr. *sith-* 'long' shortened from *sītu- < *sētu- < *seh_1i̯-tu-?	*seh_1i̯ 'nachlassen'[24]
ambiguguous	***CeNC***
OIr. *crécht* 'wound, ulcer' < *(s)kreng^w-tV-/*(s)krn̥g^w-tV-	?*(s)kreng^w 'sich krümmen, schrumpfen' (LIV 510)

4. Exceptions

We are left with a handful of formations that fail to correspond to the rules set out above.

a) *tu*-formations	
MIr. *gert* 'milk, dung' < *g^{wh}er-tu-[25]	*g^{wh}er 'warm werden' (LIV 196)
MIr. *tócht* m. 'piece, portion' < *(s)teu̯g-tu-	*(s)teu̯g 'in heftige Bewegung geraten' (LIV 547)
MIr. *écht* m. 'slaughter, slaying' < *n̥k̂-tu-?	*nek̂ 'verschwinden, verloren gehen' (LIV 407)

[24] Cf. LÜHR (1978 121ff.), RASMUSSEN (1989, 59), SCHRIJVER (1991, 527).

[25] Formation from *g^{wh}er 'warm werden' proposed by HAMP (1986, 256).

b) *ti*-formations

OIr. *togairt 1* f. 'dairying, dairy-herd' < **-gar-ti-* 'herding'	**ĝar* 'tönen, rufen' (LIV 142)
OIr. *goirt* (adj.) 'hungry, starved; bitter, sour, sharp' < **g*^{wh}*or-ti-*?	*g*^{wh}*er* 'warm werden' (LIV 196)

The first two words, OIr. *gert* 'milk, dung' and *tócht* 'piece, portion' are *e*-grade derivatives from roots of which one has a liquid in auslaut, the other a semivowel plus consonant. With such roots we would expect formations with zero grade i.e. Proto-Celtic **gri-tu-* and **tuχ-tu-*. The reason for avoiding them might have been that those formations already existed (compare *grith* 'shaking' under 1.1.a and *tucht* 'form, shape' under 1.1.d). These words belong to completely different roots, but their outcome in Celtic was the same, so that the full grades of *gert* and *tócht* may be considered a means to avoid homonymy.

OIr. *écht* 'slaughter, slaying' was analyzed by McCone (1996) as a *tu*-formation with zero grade from **neḱ* 'to disappear', to which also belong Lat. *nex* f. 'death', Gk. *νεκρός* 'corpse' etc. Though this etymology is formally and semantically impeccable, we would rather expect a full grade formation as suggested by the formations listed under 2c). We might therefore assume either that *écht* was influenced by the OIr. *u*-stem *éc* m. 'death', or that *écht* belongs to a different root altogether, viz. **h*$_2$*enḱ* 'zuteilen'. The semantic development we would have to postulate in this case would be comparable to that of Hitt. *henkan-* n. 'death'.

OIr. *togairt* 'dairying, dairy-herd' has the superficial appearance of a full grade *ti*-formation 'herding' from *'calling' from the root **ĝar* 'to shout, to sound' with unusual *a*-vocalism. But what we expect is a zero grade **grith*, a formation which actually exists, compare No. 1.1.a). *gairt* may therefore rather be explained as an Irish formation from the present stem *gar-*, compare OIr. *gairid* 'calls, cries out'. As a parallel we may adduce OIr. *dairt 1* 'a heifer of one year' < **darti-* which is based on the present stem of the verb *dairid* 'mounts'.

The most unusual formation is that of the adjective *goirt* 'hungry, starved; bitter, sour, sharp', which seems to be a *ti*-derivative with *o*-grade from **g*^{wh}*er* 'to get warm'. As a parallel PIE **g*^{h}*os-ti-* 'guest' is usually cited, cf. Lat. *hostis* etc., which is interpreted as a *ti*-formation of **g*^{h}*es* 'to eat, devour' etc. Alternatively, one may ask whether OIr. *goirt* which, as a *ti*-formation, has neither Celtic nor other

cognates, needs to be traced back into PIE at all. As there are several very frequent adjectives inflecting as *i*-stems in OIr. - cf. 2.1.d), f) and 2.3. - the *i*-inflection of *goirt* might have been secondarily transferred to an original *to*-formation where the *o*-grade of the root would be more usual.

Unfortunately, this formation is not attested in OIr. The abstract *gorte*, *gortae* 'hunger, famine' is another possible source of the *i*-inflection of *goirt*, but as there are no clear examples of a form ?*goirte* that point to original palatalized -*rt*-, there is no way to prove the assumption that *gorte* influenced the adjective.

An additional problem is connected with *goirt*: There is reason to believe that the cluster -*rt*- impeded raising of *e*, but not raising of *o* to *u*, compare the 3rd pers. sg. absolute *uirt* vs. conjunct -*ort* 'slayed, killed'. Instead of postulating an unraised preform $*g^{wh}$*or-ti-* we could alternatively reconstruct a Proto-Celtic preform $*g^{w}$*ar-ti-* which would then also underlie MW *gwarth* 'shame, reproach'. It could be a new formation like *dairt*, *gairt*. The question of raising of *o*, however, needs more research (McCone p.c.).

Summary

During some stage of Proto-Celtic, *tu*-formations were productive in the formation of verbal nouns and partly replaced older *ti*-formations in this function. Thereby they adopted their characteristic zero grade of the root whenever the root structure was convenient for doing so. Some root types are ambiguous with regard to their behaviour, but one should avoid reconstructing *e*-grade *a priori*, referring to the situation in IE. Here Celtic had its own development, which needs to be taken into consideration first.

The bulk of OIr. *tu*-formations can thus be explained in a satisfying way. A more difficult situation arises with regard to *ti*-formations. Being both less in number and of greater formal diversity, it is difficult to draw general conclusions. There seems to be a slight majority with zero grade in the root, as assumed for late IE. With regard to root ablaut and root structure expectations are only partly fulfilled: *laith* 'ale, liquor' and *maith* 'good' probably show zero grade though derived from *CeH*-roots, *féith* 'fibre, sinew' and *tréith* 'feeble' have *e*- instead of zero grade. In the case of *féith*, the problem is not one of Celtic alone, however.

The interpretation of the well-represented group of formations from *CeRH*-roots depends mainly on the question as to whether one is prepared to accept schwebeablaut. The bulk of examples may be somewhat reduced if a number of roots are reconstructed as *CReH*, which may in some cases - pace LIV - be possible. Further research in the field of the interrelationship of root structure and ablaut grade may help to solve this problem.

Cover symbols

C = any stop, but also *s*
R = any resonant (*l, m, n, r*)
L = any liquid (*l, r*)
N = any nasal (*m, n*)
U = any semivowel (*i̯, u̯*)
H = any laryngeal (h_1, h_2, h_3)

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Semantics and typology of Hittite *-ant*

FOLKE JOSEPHSON

0. The Hittite nominal suffix *-ant-* has been discussed in a variety of contexts, such as the significance of nominal forms with *-ant-* for the case system and their significance for animacy and gender. The category of number is also involved, and it will be important in this discussion, but not so much the much discussed collective and its plural as the significance of the presence of a singulative in Hittite. A singulative category has not been mentioned very often in IE studies, but it plays an important role in the discussion of early Greek by LEUKART (1994) (especially p.149 sqq. and note 57 with references, and pp.153-155 with n.66, which contains a reference to KNOBLOCH (1955), and n.68). In spite of the relevance of this category to the problem of *-ant-,* the singulative has not figured in the discussion about Hittite *-ant-,* though the suffix has been said to be individualizing.

The question of the possible presence of split ergativity in Hittite, as discussed by GARRETT (1990a and 1990b), will not be the main subject of the present investigation, though observations about agentivity and the use of the nominative case will be relevant for that question.

I shall mostly concentrate on aspects of the semantics of the suffix that remain problematic and their significance for judging the entire spectrum of the semantic and syntactic properties of *-ant-*. Typological comparisons will be made.

1. *-ant-* in the texts

1.1. Vocabulary entries:

Forms with *-ant-* occur in several entries of the Akkadian-Hittite vocabulary published by OTTEN - VON SODEN (1968):

KBo I 44+ KBo XIII 1 I 44: *ka-as-ta-an-za* "a famine" (OTTEN - VON SODEN 1968. 10, 13).

Cf. KUB XVII 10 I 17-18: *kasza kisati* "famine occurred", followed by ....*kistantit harkiyanzi* "(men and gods) perish by the famine". Is *-ant-* of *kistantit* individualizing (with GOETZE 1951), so that it refers to the specific prevailing famine? Does *kistantit* mean "by the course of the famine", with famine seen as a process or a period of hunger, or does it refer to famine as an active force? The medial denominative verb *kistanziya-* occurs in the Anitta text (KBo III 22 rev. 45-46): *man-as appizziyanna kistanziyattat* "...and when it (the city) finally suffered a famine... ".

kasza aqqatarr-a "famine and death" (KUB XXXVI 7a IV 48), *n-at kasti akir* "and they died of hunger" (KUB XXVI 69 VI 13), *kastit-a man akten* "and you would have died of hunger" (KUB XIV 1 obv.12) refer generally to famine. In *kasza kisari nu-za attas* DUMU-*an* KÙ.BABBAR-*i hapr[aizzi* "famine occurs and a father sells his son for silver" (KUB VIII 35 obv.14) it does definitely not refer to a specific famine.

KBo I 44+KBo XIII 1 I 51: *hasmusalliyas gapanza* glosses *qû* "thread, web" as does *awawas hanzanas* "a cobweb" ibd. line 50. Is this the same as **gapinanza?* (Cf. PUHVEL HED) *gapina-* is "thread, yarn" : the meaning of the gloss is "a thread (or web) of (a) *hasmusalli-*."

In IV 18 of the same text, *kusduwanza* corresponds to Sum. *eme.sig*, Akk. *karṣu* "slander".

PUHVEL (HED) considers *kusduwanza* to be a participle. It would, however, in that case hardly be a good equivalent of *eme.sig* and *karṣu*. A nomen actionis would be more appropriate, such as a particular occurrence of slander or slandering activity, or perhaps a slandering utterance as a causer of defamation or an instrument of defamation. The verbal noun is *kusduwatar,* but there is also *kusduwantauwar* (KBo I 42 IV 4), possibly from a verb **kusduwantai-* derived from *kusduwant-* (cf. PUHVEL HED). Cf. *kistant-* and *kistanziyattat.*

IV 37: *anda taksanza* (dupl. has *anda taksuwa)* for Akk. *šuteṣû* "sich streiten". The meaning might be something like "joining in", in the sense of "joining (in) battle". This is one more *-anza* form that it is difficult to account for, which is just like *kusduwanza* in IV 18,

where one would expect *kusduwatar*. The variant shows it to be meant as equivalent to a verbal noun. For the meaning of *taks-* in this passage OTTEN - VON SODEN refer to *idalu taks-*, GÍR-*an taks-*; *taks-* is a transitive verb. LUGAL-*as* KASKAL-*sa taksuwanzi* of the legal paragraph I 56 (KBo IV 2 + III 21ff.) with its variant reading *pawanzi,* in a military context, would seem to be a possible comparandum.

(IV 25 fragmentary *-wa-an-za*)

It should be investigated whether other not too well understood occurrences of nouns and adjectives with *-ant-* may contribute to a better understanding of the function of the suffix in the vocabularies.

1.2. The Number "one"

KBo XIII 10 obv? 6 [X] *a-a-an-za* INIM-*as*
7 [x] x *a-a-an-za* INIM-*as ku-e-da-ni e-es-ta*
8 [X IN]IM-*as ku-e-da-ni* NU.GÁL.
For *ānt-*, cf. EICHNER (1992, 36, f.): "one single thing".
Cf. with EICHNER: KBo I 44+ obv. 9f. NU.GÁL-*kán ku-e-da-ni ku-it* "who does not have anything"

A Hittite word corresponding to a potential IE **oi-ont-* should be added to **oi-ko- *oi-wo-* and **oi-no-* as dialectally distributed derivatives of one root. They all mean "one" or "single, alone" as does Greek *οἶος*.

**oino-ko-* (Germ. **ainaχa-*, Gothic *ainahs*) and **oino-go-*, Germanic **ainaka-* (Icel. *einka* "only') (*Numerals* 656-657) show a *-ko-* (*-go-*) suffix added to **oino-*. The role of **-ko* should be the same as that of *-ka-* in Sanskrit *eka-*, emphasizing uniqueness or separateness. This should also be the function of *-ant-* in the Hittite numeral, which would thus mean "a single one". The suffix *-ant-* functions as a *singulative* in the same way as **-ko-*.

The entire segment **-oiwo-* occurs as a singulative suffix in the Tocharian plurative *missaiwenta* "pieces of meat", which is formed with the plural ending *-nta* added to a singulative stem.

A *separative* or *distributive* meaning of the plurative is found in the Tocharian plurative *ostawaiwenta-ne* "in houses taken one by one" in the sense of "each one in his separate house".

There is a similar function of *-ant-* in Hittite. KBo XVIII 3 IV 25-26: ^{GIŠ}*harpa-ma* 1-*anta* LUGAL-*as* GÌR-*si kitta* MUNUS.LUGAL *-s-a* 1-*anta kitta*. 1-*anta* 1-*anta* as "separately (in one location)" and "separately (in another location)" was cited by MELCHERT (2000) for distributive plural formed with a numeral, "individualizing" *-ant-*, and the noun in the collective plural.

1-*anta*, collectivized by *-a* (NEU 1992, MELCHERT 2000) corresponds to Akk. *ištenūtu* "unit"

The suffix *-ant-* is also found with the numbers "eight", "nine" and "ten" in some interesting passages to be discussed below.

1.3. Topicalization?

Some forms ending in *-anza* offer particular difficulties of interpretation:

zik-mu ^{m}*zus* ŠEŠ.DUG.G*[A-YA] murtanza* EGIR-*pa*...*hatrai* Maşat 72 rev. 34ff. "write you back to me, my brother Zus, on the subject of the m.". It is not easy to determine the reason for the use of *murtanza* in this passage. It could be a Luwian accusative (cf. RIEKEN 1994, 48 n.25).

Obv 9 of the same text shows the accusative *murta: nasta murta tuelma karassandu* "Dein murta-Holz sollen sie abschneiden". If the variation is not quite at random the longer form could possibly be seen as determined as referring back to the already mentioned *murta* or it could have a topicalizing function.

A topicalizing (or presentative) nominative form "as to" is a possible interpretation of *hattulannaza* in KUB XVIII 54 obv 3-6: *MAHAR* ^{d}UTU^{ŠI} MUNUS.LUGAL *assul kuit mahhan* ŠÀ ERÍN.MEŠ *sarikuwa-ya-kan Ù* ŠÀ ERÍN.MEŠ UKU.UŠ *hattulannaza kuit mahhan numu* EN-*YA* EGIR-*pa ŠU-PUR*, where it has the same syntactic position as the preceding *assul*. (Cf. COTTICELLI-KURRAS 1991, 114.) *hattulannant-* may, however, also be understood as a lexicalized "state of health" (PUHVEL HED) or "the particular health". The interpretation of the form cannot be like that of *murtanza* in the preceding example. It would be difficult to explain *hattulanaza* as a true Luwian neuter ("health" is Luwian *hattulahi(t)-* and *hattulahisa*).

The opposite of health is *irma(n)-* and *irmanant-*, "illness". *irmananza* occurs with gloss-wedges in KUB XXXVII 190 rev.6 and is Luwian in IGI.HI.A-*wassanza* GIG-*anza* (KUB XXXV 107 III 16). It is the agent (subject or instigator) of an action expressed by a verb with two arguments in the Hittite passage KBo IV 6 obv. 24-25: *n-an* GIG-*anza tamastat*.

A most interesting construction is *irmananza appatar-set* (KUB XXXVII 190 rev.6), where *irmananza* could be topic or agent. PUHVEL (HED 1/2, 280) considers the construction to be a hendiadys. An agentive function seems to be a possible interpretation. The case form and function of *irmananza* would in that case have to be determined in connection with the question of verbal rection of verbal nouns and the question of the "ergative" in Hittite.

For a different construction with *appatar*, cf. *kurur appatar* (Akk. *zārum*) "resort to war" (KUB I 45 rev. 4) (*MSL* 3:53), where *kurur* is the object of *appatar*.

1.4. Verbal noun with verbal rection

In Arabic, the subject of a verbal noun most commonly has the genitive case. If the direct object is in the genitive, the subject follows in the nominative as if it were the subject of a verb. There is a third very rare possibility with both nominative and accusative. (Cf. COMRIE 1976, 194-195.) The verbal nature of the masdar is stronger than that of verbal nouns in most European languages.

The Hittite construction *irmananza appatar-set* contains a possessive pronoun (semantically close to a genitive) and *irmananza* could be the subject or agent of the verbal noun, which would then be of a strongly verbal nature, as in Arabic. An interpretation of *irmananza* as a nominative would seem to be easier than as an ergative case, with this syntactical construction involving *-set* referring to *irmananza*. One would perhaps rather have expected a genitive, which would bring the construction closer to the Turkish construction *Hasan-in mektubu yaz-ma-si* (COMRIE 1976, 197). In Turkish, the action nominal can take a direct object in the accusative/absolute case rather than the genitive. *kurur appatar* shows a verbal nature of the Hittite verbal noun and the construction *irmananza appatar-set* would make this even more apparent. The word order subject-verb would be that of a normal sentence with a finite verb.

Hittite would thus have sentence-like action nominals in accordance with the classification principle of COMRIE (1976, 200) imply-

ing a continuum between noun phrase-like and sentence-like action nominals. The question is how far on the scale towards sentence-like construction Hittite is able to go. If *irmananza* with an agentive suffix *-ant-* were to be interpreted as a subject in the nominative case, the construction would be no more strange than the Arabic construction.

A comparison may be made with the English gerund nominalization *John('s) refusing the offer,* which has the internal structure of a sentence (COMRIE 1976, 178).

1.5. With *kās* and *apās*

The Maşat texts (Alp 1998) (passim) show *kas tuppiyanza,* "this tablet" as the subject of *wemiya-* with the pronoun *kas* in the nominative case. Occurrences in the Maşat texts with *tuppi* as object show the neuter form *tuppi*. There is one occurrence of *ki tuppi* as object of *halzai* (81 rev. 29). There is also the dative-locative form *kedani tuppi* (89 rev. 26).

tuppiyanza can be interpreted as in other cases when the verb is transitive and a neuter functions as an agent, and as regards the case form the nominative form of the pronoun *kas* would seem to be an indication that *tuppiyanza* could be a nominative.

If we consider *tuppianza* to be a nominative and the suffix *-ant-* to have a singulative, identificational and specifying function, the suffixed form can be said to be used in order to select *tuppi* for agentivity and subjecthood. Such a selection takes place in many other languages without formal expression, as described for English by LEMMENS (1998, 99): "inanimate entities that surface as the subject of transitive verbs". They should be regarded as Agents and: "...the notion AGENT represents a proto-type-based category whose structure is experientally motivated...". An Instrument may be promoted to Agent in the way described by LEMMENS 1998, 99 ff. in the chapter entitled "The Agent-centeredness of the transitive paradigm". The AGENT may be the Actor or the Instigator in an ergative system (LEMMENS 1988, 39 ff. with reference to DAVIDSE (1991): "The basic building-block of the transitive paradigm is thus the ACTOR-PROCESS combination ..." (LEMMENS op.cit. 41). It may include an inert Goal. *mahhan-ta kas tuppiyanza anda wemiyazzi* "As soon as this tablet reaches you" could be an example. GARRETT (1990a, 41) cites one of the passages containing this formula in his argumentation for what he considers to be an ergative case form. An agentive function of *-ant-*

combined with a nominative case, as indicated by the pronoun, is an alternative solution.

Similarly, in KBo X 45 IV 39-41 *kās aniyawaranza* is the subject or agent of *parkunuddu*.

In *kāss-a-za* URU-*az parnanzassa* (UD)U.A.LUM DÙ-*ru nu* LÍL-*ri* GE_6-*in* KI-*an argaru* (KUB XLI 8 IV 30-31): "Let this very town and (this very) house become a ram and in the steppe let it mount the Dark Earth" both URU-*az* and *parnanza* have the *-ant-* suffix. The verb is intransitive. A transitive verb *argaru* follows later and may possibly have anticipated the choice of the *-ant-* forms. An "ergative" function is not obvious, though GARRETT (1990a, 50) considers it to be appropriate as the verb has two arguments.

There is a variant reading: URU-*as parnas* (KBo X 45 IV 30-32) showing a nominative.

The following example shows *apās:*

nu KUR *uruHatti-ya apās ishananza arha namma zinne[sta* (KUB XIV 14 + XIX 2 rev.23). The verb is intransitive. Here, *ishananza* does not necessarily have to be explained by an agentive function of the suffix, also because *ishanant-* may be seen as having a different lexical meaning from *eshar,* such as "bleeding" or "hemorrhage", caused by its reference to a particular single instance.

Cf. also KUB XLIV 63 obv. II x+2: *[nu]ssi ishananza* EGIR-*an arha h[u* ... "die Blutung wird ihm auf(hören)" (StBoT 19, p. 28). The verb is intransitive.

For the verb, cf. EGIR-*an arha huittiyawas* (KUB XV 2 I 12').

In *eshananzass-a antu(hs]a[s...]iyawass-a* (KUB IV 1 II 22-23) (VON SCHULER 1965, 172) agentivity is no explanation for *eshanant-*.

In *nu kun* EN.SISKUR *nam[ma esh]ahrawanza haratnanza le epdu* (2083/g 8-9) "may weeping and scandal no further seize this sacrificer", the suffix lends agentivity to *eshahru* as well as *haratar* and the

verb is in this case transitive. This kind of example does of course not falsify the solution proposed by GARRETT. (*eshahruwanza* may, however, be translated by "flow of tears" or "weeping", like *ishananza* by "bleeding".)

Occurrences of a singulative or specifying "one" together with a demonstrative pronoun are found in many languages. Cf. Welsh: *yr vn awr honno* "in that very hour", with a demonstrative pronoun and *vn* "one" expressing specificity. *-ant-* may thus in principle be understood as expressing singulativity and specificity together with a demonstrative pronoun in a similar way. Singulative and specifying function of *-ant-* has already been discussed and is not opposed to an agentive function.

1.6. With a possessive pronoun

A.A-*andassan* "his force" (accusative) (KBo XVII 17 obv.IV? 7') (StBoT 25,25, StBoT 26,223), refers to "the specific force that is his". (Cf. NEU 1989, note 35.)

labarnas surkis[ses] tegassit wemiya[nzi labarnas] lahhurnuzziyant[es-ses (nepis)sit wemiyanzi] (KBo XVII 22 III 10'-12') is an OH example of a plural form with nominative ending, where agentive meaning of the suffixed form may be present (cf. CHD, where the form is considered as ergative). A reference to individual (particular) "leafy branches" may also be an interpretation, as they are those belonging to the person of the king. (*lahhurnuzzes* as subject of a transitive verb *(appanzi)* does occur in the NH text KBo XIV 142 II 17). The preceding *surkis* occurs in a parallel syntactic construction, which is also followed by the possessive pronoun, but it is not a neuter, and does not need *-ant-* to form a count noun or to express agentivity.

KUB XIV 86 I 4-5: *nu-tta namma* GÍR.MEŠ-KA *hahhalan[tes le] tameskanzi* also shows what seems to be a plural nominative formed on a singulative *hahhalant-*. (*hahhal* is found in a similar context (as the subject of an intransitive verb) in KUB XV 34 I 43-44: *nusmaskan hahhal ANA* GÍR.MEŠ-*KUNU le tiyezzi*.)

The fact that *nominative* plural forms with *-ant-* are used in constructions where a singular would be a so-called ergative in *-anza* is a problem for the hypothesis of an ergative case in Hittite, in any case in a synchronic analysis and on the surface level. This problem was

treated by GARRETT (1990a, 40sqq.), who realized the difficulties but tried to offer a solution for Hittite and Luwian (p.54) involving an addition of productive nominative endings to what would still be an ergative.

Occurrences of singular *-nza* or plural *-antes* in co-ordination with other nouns in the nominative case is another problem.

A singulative *-anz* allowing for a plurative *-antes,* in combination with a promotion of a neuter noun to subject function would solve these difficulties.

2. Analysis of the functions

2.1. Plural of the singulative (plurative)

A singulative and a plural of the singulative (plurative) are found in some IE and non-IE languages.

In Welsh *adar* "birds" forms a singulative *ederyn.* A singulative like *ederyn* refers to a specific one of the species.

gal "enmity", "enemy" forms a singulative *gelyn,* which has a plural *gelynyon.* Cf. EVANS (1989, 31).

Cf. also the pluralization of the Semitic *nomen unitatis.*

The Tocharian plurative form *missaiwenta*, which is based on a singulative, has already been mentioned.

Latin *pecud-* "one head of cattle" was considered by SCHMIDT (1889, 53-54) as indicating an individual animal. LEUKART (1984,155) discusses this formation in the context of the singulative as found in Greek. PINAULT (1997, 209) suggests that Toch. A *śoś* is formed with a plural ending *-es* added to the same singulative base as that of Latin *pecudes.*

These are examples of what may be called *déixis identificationelle singulative* and of *nongénéralisabilité*, to use the terminology of VAN SCHOONEVELD (1994, 190), which he, however. applies in a different and more general manner. It will allow for a grammatical plural of original non-count nouns.

udneyant-

KUB XXIII 11 III 27: /x KUR-*e-an-za ku-u-ru-ur IṢBAT*

KUR-eanza in this passage refers to a certain country and its inhabitants. An agentive interpretation is appropriate for this passage.

According to NEU (1989, 5) *udneyant- is* "wie eine Person zu verstehen" and refers to the population.

In the Madduwatta text obv.25: *kuitwa* KUR-*eanzamatta kurur epzi*, KUR-*eanza* refers to a single specific country and its population. The use of the neuter pronoun *kuit* is interesting. It does not make it obvious that KUR-*eanza* is of animate gender. Cf. *utne [kuit k]uit-pat arais* (KBo III 22 obv.11-12, Anitta text).

udneyantan hum[andan] (gen.plur.) (Anitta text obv.25) refers to all the individual countries and their population. The form could be considered as a plurative. Cf. *utne humanda* in line 38: "all countries".

antuhsanant-

Maşat 37 obv. 15f. *man-wa-kan antuhsa[nantes h]udak naitti* ... "If you do not immediately send personnel...".

The longer plural form should probably be restored because of the space to be filled. It would refer to *units* of workers needed for a specific task: *pluralité d'unités discrètes* (VAN SCHOONEVELD 1994, 211).

antuhsanant- refers to a group of persons thought of as single and complete in itself. It allows for a plural (plurative), as does *udneyant-*. *antuhsatar* may, however, be used in a similar way, as subject (of *arantallinzi* in KUB VI 41 I 25) or object and can mean a "body of men, contingent" (Cf. HED). It lacks the identificational singulativity of *antuhsanant-*. *"Individualisierung durch klassifizierende Zusammenfassung"* is a relevant description mentioned by SEILER (1985) in connection with the reclassificational function of the Arabic suffix *-at-*, which forms not only *nomina unitatis* and *nomina vicis* from collective nouns, but also collectives, by an inverted complementary procedure.

In KUB XIX 10 I 6: *antuhsananza* URU.HI.A-*ŠUNU* EGIR-*pa eppir* "the population reoccupied their towns", *antuhsananza* refers

to the population of a number of specific towns seen as a collective unit (+plur). The verb has the plural form. The difference in meaning from that of *antuhsatar* seems to be small. The *-ant-* form is at the same time appropriate for agentivity ("ergativity") compatible with the function as subject of a transitive verb. One would perhaps have expected a plurative *antuhsanantes* for the population of the different towns.

2.2. The indefinite specific

The normal way of singularization in most languages is the use of "one", which is at the same time, in many languages, the indefinite article.

The indefinite may be SPECIFIC or NON-SPECIFIC.

HASPELMATH (1997, 37ff.) describes the difference between SPECIFIC or NON-SPECIFIC:

Nobuku wants to marry a native speaker of Ainu
she fell in love with him SPECIFIC
because she is Ainu herself NON-SPECIFIC (identity not established).
The SPECIFIC may have a discourse referent.
Meaning: "a certain", "ein bestimmter".

In Russian WH-*to* is used for the SPECIFIC, as opposed to WH-*nibud'*.

Hittite *-ant-* often seems to function in a way similar to that of an indefinite article of the specific. It singles out one, whereby "the speaker presupposes the existence and unique identifiability of its referent". (HASPELMATH 1997, 38: "ein bestimmter").

In languages with articles a noun with no article is a non-individual, non-singulative form (DEZSÖ 1969, 37-38 as mentioned by HETZRON 1971). A form of this meaning is found in several of the occurrences of *kasza* discussed in the initial paragraph of this paper. In KUB XVII 10 I 17-18 the specificity of the famine is not stressed when the occurrence of famine is mentioned initially, but *-ant-* occurs when it is subsequently mentioned in connection with the dying caused by it, where it is important to make reference to the *specificity* of the famine as the actual one causing the starvation in the land. Specificity is pre-

sent, but not indefiniteness in this case. On the other hand, *kastanza* and *gapanza* in the vocabulary passages may be considered for an article-like function of the suffix as indicating the indefinite specific.

2.2. Agentivity

As uniqueness, specificity, and identification are indicated by the suffix *-ant-* and because a noun with *-ant-* is a count-noun and stands in opposition to a non-animate collective noun it can refer to an Agent or an Instigator of an action and may be understood as animate. An Agent is normally, but not necessarily, seen as animate and human.

Agentive suffix and agentive nominalization are discussed by LEMMENS (1998, 130f.), who refers to agent-transitive Actor and ergative Instigator.

Instruments and Forces are Agents (LEMMENS 1998, 100).

Ergative verbs are less concerned with profiling the Instigator (132). Ergative verbs gravitate towards the medium (op.cit. 131).

When the cause is more active or furnished with a higher degree of responsibility, it tends to surface as the Instigator in an effective construction: e.g. *the waves drowned me* (op.cit. 225).

Hittite *-ant-* in its so-called ergative use seems to share these traits. In a sentence as *the water drowned me* Hittite would use the form with *-ant-* (*wetenanza*) for the Instigator. The active and responsible cause or instigator cannot be a non-specific neuter noun, but has to be singularized by addition of the suffix *-ant-,* which allows for agentivity and for formal expression of the nominative case. In the passage *parkunuddu suppis* A-*anza* HUL-*un* EME-*an papratar eshar* (KBo X 45 IV 13-14) the qualifying adjective *suppis* has the nominative case form.

The typical agentive suffix of English is *-er*. Its prototypical use is reference to a human agent (LEMMENS 1998,131). The Agent may be Actor or ergative Instigator. "On the other hand, the strong independence of certain ergative MEDIUM-PROCESS constellations - inherited from the original transitive construction that has been subject to ergativization - motivates an extension of the *er*-suffix to profiling the Medium instead of the Instigator" (LEMMENS 1998,139). *-er* has also developed into a marker of instrument: "the new wagon is a mule killer" (op.cit. 129). It may refer to clothing as *loafers, loungers*. It

may also refer to *events* that bring about a certain result (event Agents, such as *thriller*).

Furthermore, work-weeks may be *all-nighters*, and decisions may be *no-brainers*: they require no brain. The semantics of *-er* gradually loses its agentive meaning by a process of grammaticalization (RYDER 1997).

There are occasional Medium-profiling derivations, such as *starver,* which "are motivated by the salience of the Medium" (LEMMENS op.cit. 136). "It is the semantics of the usage that is responsible for the salience of the self-instigating participant". "In these uses, the Medium is almost promoted to an intransitive Actor" (LEMMENS op.cit. 137).

Agentivity is not the only function of *-er*. It may also be goal-profiling, being the nominal equivalent of a middle construction, which profiles a goal (Cf. chapter 4 section 4.2 in LEMMENS 1998). An example of this is *dipper*: something that is dipped before being eaten.

Denominal use of *-er* is old (MARCHAND 1969, 273). As for deverbal *-er*, other than subject types of reference occur (MARCHAND 1969).

The parallel with Hittite *-ant-* is obviously not a complete one. In the case of Hittite *-ant-*, the expression of agentivity is one function of the suffix, but it is also used for the expression of the unique identifiablity of the referent.

kusduwanza in the vocabulary entry KBo I 44 + KBo XIII 1 IV 18 may perhaps, with some typological plausibility, be understood as an *event agent*, such as a slandering statement which brings about defamation. It is, however, more probable that it refers to a single instance of slander and to the activity of slandering, whereas *kusduwatar* can refer to slander as the general offence of making such a statement, as KUB I 16 II 51: *kustuwata le handan-pat esdu.* The difference between *kusduwanza* and *kusduwatar* would be identifiable activity as against an abstract notion that may also be seen as a result.

In this case it is not an agentive function that is most obviously in evidence, but something more comparable with the function of the English suffix *-ing* and its further Germanic correspondents which offer interesting typological parallels. They will be discussed in a subsequent paragraph.

2.4. Different uses of *-ant-*

Deverbal adjectival participles, denominal adjectives and possessive adjectives. Also deadjectival adjectives, which need a special discussion. The fact that the participle in *-ant* is ambivalent to voice distinctions is a special trait of Hittite.

Singulative *-ant*

singles out the specific from the general: "a certain one', but also "the one in question".

It has a semantic sense close to that of an *indefinite article of the SPECIFIC.*

It *singles out* one part.

According to GOETZE (1951, 470), in a word like *gimmant-,* it indicates an "indivisible whole" taken out of a larger whole (as the year). It would then refer to winter as one specific part of the year. *gimmant-* shows a *t*-extension of an *-r*/*-n*-stem, as observed by GARRETT (1990a. 41 n.4), so that *zenant-* would be a better example.

With numerals it *singles out* the *last of a sequence,* and completes the sequence: *9-anti-ma* KASKAL-*si* (IBoT II 128 rev. 5') "but by the ninth time..." (EICHNER 1992, 86).

9!-andas happesnas ser (KUB XLIII 60 I 23) "on the nine limbs" *9-anti happesni* (KBo XXI 14 obv. 13') refer to *each and every of the nine limbs, seen as a whole.*

IŠ-TU 2 *QATI-KA* 10-*antit kalulupit* (KUB XVII 32,12') "with your two hands and ten fingers" refers to both hands together and the complete number or unit, *all* (i.e. *each and every)* of the ten fingers.

These passages were cited by MELCHERT (2000) as examples of distributive plural.

KUB XXXIII 51 5-9: ... *nasta anda 4-tas halhaltumarias lalukkiszi...* "...and it becomes bright in the four corners" contains a form with the suffix *-ant-* for "all four", which is of the same nature as *10- antit* in the preceding example.

This use of *-ant-* explains why *-anta* may be used as the plural of collectives as in Cun.Luw IGI.HI.A-*wanta* (KUB 88 II 5ff.), "sets of eyes" as discussed by MELCHERT (2000).

The use of *-ant-* in KUB XXXI 143 II 8 sqq.: 2-*is* 8-*tas kistunas* and 2-*is* 8-*tas maskitas* "twice eight *k*..." (cited by MELCHERT 2000) shows a numeral noun meaning "unit of eight", semantically similar to the OIr. numeral substantive *ocht(a)e* (THURNEYSEN 1975, 243).

OIr. *uathad* means a "single thing", "unit of one". The OIr. numeral substantives may be of adjectival origin (THURNEYSEN 1975 ibd.). The Hittite numerals with *-ant-* serve as adjectives.

There could be reason to compare Lat. *triens* "third part", which refers to a *divisional unit.* There is a similar formation in Avestan: *θrižant-*.

This use of *-ent/-ont* may be explained by the function of the suffix as a *quantifier*.

It may make a noun fit for *topicalization.*

It forms exocentric adjectives and nouns such as *natant-* "provided with a drinking tube" and *hattant-* "a clever one", where it *corporalizes* and concretizes a quality.

It is therefore also used for proper names such as "Silver", KÙ.BABBAR-*ant-* (KÙ.BABBAR-*anti* in the vocative case is not an ergative!).

It characterizes and forms *abundatives,* as the name of the city called *kurkanza*, "Foaltown".

It makes a non-count noun countable and thus allows for a grammatical plural. This is like the *singulative* of Welsh and the *nomina unitatis* of Semitic languages.

A mass noun like "water", which is spatially unbounded, obtains the character of a a bounded count-noun by means of *-ant-*. (Cf. MOURELATOS (1981, 202 sqq.), cited by MICHAELIS (1998, 6)).

-ant- decollectivizes a non-count noun and may as a result bestow animate gender to an inanimate noun.

It may function as an *agentive* suffix (not ergative on a semantic level). It is necessary for neuters in order to permit Agentivity, and it is otherwise facultative to permit or stress Agentivity (as Actor and as Instigator in effective (ergative) constructions).

The agentive is an old role of the IE suffix: *-ent/ont-*:

$*h_1$dent- "tooth" which is characterized by its action: "one connected with eating, an eating one", is a substantivized adjective: "belonging to eating". A tooth is a performer of eating and thus an agent.

The **-e/ont-* participle belongs to this complex and may, but need not, be understood as effective. (Cf. LEMMENS 1998, 225, as discussed below). The adjectival use may be the original domain of the suffix.

Possibly the *-t* of *-n-t-* adds specificity to what has already been characterized by the individualizing suffix *-n-*. Cf. *-to* in Russian *kto-to* as an indefinite of the specific.

3. Parallels in other languages

3.1. A typological parallel

Certain typological comparisons can be made with Germanic suffixes:

-inga-/-unga- refers to persons, animals etc.

Germanic *-ingo-/-ungo-* form denominal abstracts and verbal abstracts, German *-ung* mostly has a transitive meaning.

Old English *-ing* and *-ung* form nomina actionis, but also nomina rei actae.

-ing does not commonly denote abstract results in English, though there are some few examples like *learning* and *earnings*. (MARCHAND, 1969, 303) It often denotes general practice, activity: *driving, shopping, thieving.*

The difference between *thieving* and *theft* could be analysed as aspectual. Cf. *kusduwanza* and *kusduwatar* as analysed above. LEMMENS (1998, 116 ff.), while discussing *killing*, observes that zero nominalizations such as *murder* and those in *-ion* (e.g. *execution*) differ from *-ing* nominalizations in the salient evocation of the result of the process. The *-ing* nominals furnish an internal perspective on the process. *kill* as in *the final kill* strongly implies goal-achievement.

-ing is also denominal as in *housing* "houses collectively" and *bedding* "the articles which compose the bed" (MARCHAND 1969, 303).

-ing forms so-called gerunds (substantives with verbal rection) in English.

The construction may be effective: *this necktie is choking me.*

a choking collar does, however, exclude the lethal outcome (LEMMENS 1998,225).

The English gerund nominalization has the internal structure of a sentence: *John('s) refusing the offer* (COMRIE 1976, 178). With a derived nominal we find: *John's refusal of the offer.*

English *even, evening* and *morn, morning* (GOETZE 1951, 470) are similar to *zenas kisari* as against *man zenanza, zenanza mahhan, kuitman hameshanza, mahhan hameshanza kisat* as particular single periods of a year: EZEN *zenandas,* EZEN *hameshandas.*

-ing may express a particular single instance: *happening, opening.*

There is a related suffix in Swedish: *-ning*, which possesses a singulative meaning.

blinkning (genus commune) refers to a particular single instance of winking (discussed by NOREEN (1905- vol. 5, 449)) and is singulative, individual and non-iterative (LOMAN 1964,182). It forms the plural *blinkningar*. Another formation, *blinkande* (neuter) is iterative or durative.

förfrågningar "questions asked at different occasions", "inquiries" functions as the plural of *förfrågan* "inquiry" (non countable).

Plural forms of *-ning* formations were extremely common in the Swedish dialect of Nuckö in Estonia (LAGMAN 1958,109) and the meaning of the plural form comes close to that of the abstract noun in *-ande.*

önskan "wish" has no plural; *önskningar* provides a plural.

Cf. the Semitic *nomina vicis: the doing of an act once. du.pl.: twice or oftener.*

kusduwanza with the possible meaning of a single instance of

slandering (or the activity of slandering), as opposed to *kusduwatar,* should be brought to mind in this context. It would not be a participle, but more like the English gerund nominalization or the Swedish nouns in *-ning*.

3.2. Discrimination and individualization as function of the definite and indefinite articles

According to KAČNEL'SON (1972,35-39) (cited and discussed by ANDERSSON 1995) the universal minimum of information carried by the articles are the functions of discrimination *(vydelenie)* and identification *(identifikaciya)*. Identification is primarily the function of the definite article and discrimination (individualization) is the function of the indefinite article.

The indefinite expresses a relation to a class of similar phenomena. The definite indicates uniqueness in the described situation. *(Lingvističeski enciklopedičeski slovar,* Moskva 1990, 349.)

The indefinite article points at a particular object as distinguished from a class of similar objects.

The invariant meanings of indefiniteness and definiteness (individualization vs. identification) are related to four different reference types: specific, non-specific, generic and non-referential. Generic reference falls outside the definite-indefinite contrast. In anaphoric relations it is not always distinguishable from specific reference. It must be inferred by other means, such as the category of number (ANDERSSON 1995, 26-27).

3.3. The indefinite article and the expression of unity

This was discussed by DE CRAVALHO (1996); MILNER (1978) tries to show the relationship of the indefinite article to the numerals, but he realizes that there is, in French, an *article "un"* as in *une eau delicieuse.* There is thus, according to DE CARVALHO, an ambivalence between the objective intrinsic and permanent properties of the "seen" and the named references and the subjectivity of "seeing", which is the particular and momentaneous vision that the speaker creates for himself of the experience to be expressed.

The definite article expresses the denoted as already there, whereas the indefinite *un* expresses it comme *étant en survenance* at the moment of elocution (191). *un,une* may therefore *objectively* express

an existential property of the mentioned object, namely that it may *subjectively* be reduced to a unity, or else the hitherto non-realized *presence* of the object in the speaker's mind.

There is a relationship, but not an identity, between indefinite ("intensive") article and numeral.

3.4. Indefinite specific

Hittite *-ant-* does not have the full scope of an article, but it can express the *indefinite specific.* The primary partitive use (a unit of x, bounded value) and the reduction of the object to unity or singularity plays the main role.

The presence of the object as it is realized in the speaker's mind is expressed by *-ant-* and this is probably what explains its tendency towards topicalizing and presentative use.

The indefinite of the specific may come close to a definite.

Hittite does not possess a definite article, but a demonstrative pronoun may perform the function of identification. When a noun that has the *-ant-* suffix is being pointed out by a demonstrative the meaning is that of "this one", "that one" rather than "such a one".

Specificity and the difference between indefinite specific and indefinite non-specific was discussed by KARTTUNEN (1976), MEHLIG (1985) and IOUP (1977, 233-245). I shall refer to IOUP in the following:

There is a category of semantic reference ("specificity") (as against speaker's reference (referential/attributive references).

There are two variants of specificity belonging to the category of semantic reference: referential and attributive. (KARTTUNEN 1968, as discussed in IOUP 1977, 239-240). If "the casting director is looking for a handsome blond" he may be looking for a particular *individual* (referential) or an *ideal* type (attributive).

The Russian dichotomy *-to/-nibud'* belongs to a different (the opaque/transparent) semantic dichotomy. The latter suffix corresponds to the non-specific reading of the indefinite.

kto-to ne poet means "a particular person whom I can name if I care" or "one of the people, I'm not sure who, does not sing". This "specificity ambiguity" does not receive two linguistic manifestations in Russian (IOUP 1977, 241).

Languages that do not possess articles may have other means of expressing definiteness and indefiniteness, specificity and non-specificity, categories of semantic reference as well as unity (of the objective and subjective varieties).

Hittite has no definite or indefinite article, but the suffix *-ant-* has to be discussed in a theoretical framework implying the mentioned categories. To these belong Specificity of the referential *(individual)* or attributive *(ideal)* variety.

3.5. Specificity of the *ideal* type

3 *tapisandus* [*uetatten*] (KBo III 43,12) "bring three t. vessels!" refers to three vessels of the particular *tapisana* type.

sipanti tapisantit KUB XXXIV 117, 6)" er libiert und (zwar?) mit den *tapisant-*". (Cf. HEG III 131). This will either mean that he libates with a specific *tapisana* vessel (referential specificity) or with a vessel (or vessels) of the specific type (attributive specificity). The latter is the more probable interpretation. Specificity is additionally stressed here by means of the word order. The identical vessels are mentioned again in the following line(7): *tapisenussa danzi* "and they take the t." In this case specificity does not have to be expressed again.

Cf. *tapisanit* GIR_4 ... *sipanti* (KUB III 13 I 43) "he libates with an earthenware t." (not a specific one, but one made of a specific material, which is more emphasized here). Also in other passages where discrimination of kind is expressed by means of a word indicating the material out of which the vessel is made such as silver or gold, there is no specifying *-ant-*. (Cf. HEG III 129-131).

4. *-ant-* with adjectives

4.1. *-ant-* with qualitative adjectives

In the following examples *dannara-* "empty" occurs without *-ant-*:

.k]ās dannaras DUG ÚTUL-as (KUB XXX 2,8')

III GAL GIR_4 *dannaras danzi nu* 1-*EN* GAL GIR_4 *IŠTU* GEŠTIN *sunnanzi*....(KBo II 4 II 7-8)

dannarandan DUG.GAL *harzi* (KUB XX 85 obv. 11-12) refers to "an empty one", one that is specifically characterized by being empty. It will then be filled: *nussan watar lahhuwan.* It posesses a character of emptiness, which is in this context being distinguished from that of fullness.

GADA .... *tannarantan* KIN-*zi* (KBo XIII 109 obv. 6-7) "makes the cloth empty", gives it an empty (or smooth??) character (makes it an empty one) and thus provides it with a different (specifically new) character from that which it had before.

SÍG *antarantan kappinan* QATAMMA *iyazi* (KUB XXIV 9 I 43) "she makes likewise blue wool into a thread" followed by *antarandan* UD-*an* "blue day", to which it corresponds in a magical way. The variant H has *andaran kapina* and *antaran* UD.KAM-*an*. *-ant-* occurs appropriately but apparently facultatively in the adjective in order to single out the blueness of thread and day as the blueness is common to the two items: *a blue one,* corresponding to another *blue one.* They are specifically characterized by being blue.

In these occurrences of adjectives with *-ant-* the objects are distinguished by being of a specific character and often contrasted or compared with others.

As for the initially mentioned examples of *dannara-*, the demonstrative *kās* puts the emphasis on the noun rather than the adjective in KUB XXX 2,8'. In KBo II 4 II 7-8 three empty vessels are first mentioned and the text then goes on to mentioning each one. The emphasis is put on the number of vessels. In these passages a specific stress is placed on the quality expressed by the adjective as a distinguishing factor, as the state of the vessel is already known or can be observed.

Cf. GAL.HI.A SIG_5-*anda* GUŠKIN-*an* SIG_5-*andan* (KBo XXV 122 II 10-11) (OH).

assuwant- is of common occurrence and though specificity is intended in the cited passage this cannot be shown to be the predominant function of the suffix in *assuwant-*.

According to WEITENBERG (1984,94) *assuwant-* is attributive and *assu-* predicative. *aras-ta assuwanza* (KBo XII 30 II 6), *kuis-ta assus* (KBo XXVI 128, 5): The function of *-ant-* is to make attributive use possible.

Cf *assuwanza* in KUB V 1 I 97: SIG$_5$-*wanza* SILIM-*ul* ME-*as* (HED 1. 202): "Good took well-being" with the individualized "good (one)" as a decollectivized agent functioning as a (possibly animate) subject.

4.2. *-ant-* with quantificational adjectives

masiyant-

There are few examples. In KUB L 34 II 1-2 the reading *masiyanti* is uncertain. A parallel has *masiyanki* "however many times".

KUB IV 1 III 10-11 shows: *masiyantemasmas assu nu apenessuwan akuwanzi. masiyante* is according to wish, whatever number of individual occurrences of drinking will add up to the complete amount desired by the royal persons.

The usual correlates to *apenissuwan* are *masiyan* or *masiwan*.

***dapiyant-* "all" in the sense of "every" (exhaustiveness), "each individual", "each and every"**

humant- is "entire,whole", "every part of, all there is of", as Lat. *omnis*, Gk. ὅλος, undivided and exclusive. This is *absolute quantification*. The opposite is *tepu.*

dapi(ya)-, (dapiant) means "totus" (Cf. HED, sub *hūmant)*

dapianta is a variant to *humanda* in the Apology of Hattusili KUB I 4 + IV 21-23: KUR.KUR.MEŠ [URU]*Hatti-ma-wa-kan .... humanda .... andan nehhun*, where KUB I 8 has *dapiyanta* (Cf. *dapian* in interchange with *humanza* Laws par.46 A.ŠÀ.HI.A *dapian*).

dapi- may originally mean "strong" and refer to full measure: Cf. *dapi* ZI-*ni, nepisaz tagnaz dapidaz.*

dapiyant- is the more common form.

mankan [URU]*Ankuwas* URU-*as isparzazi UL-as dapianza* BIL-*ni*... (KUB XV 1 II 18-19) "not to its full extent, not completely". Cf. for the construction: "elle est toute noire", "als ganzer".

dapiyantes LÚ.MEŠ [URU]*gasga* "all summed up": all the men with inclusive reckoning (exhaustiveness). Cf. Russian *vse.*

dapiyant- is "all taken together" (summarized), that is *all* in the sense of every, "each and every", "every one", summed up to the full number or to full measure. *each and every* is *"one subject many times over"*. It is specific (and consisting of specific entities) and finite. *dapiant-* is close in meaning to *humant-*. *dapiant-* is "every" in the sense of very strong: every reason is very strong reason.

This use is comparable to the use of *-ant-* with numerals, referring to the complete number of a sequence of countable items which has already been mentioned.

Cf. VENDLER (1967,89): ***"all"** in the sense of each and every refers to a definite and finite set of objects.*

each and every always connote existence, all, by itself, does not (VENDLER op.cit. 91-92).

In "all violations will be prosecuted" all violations is equivalent with any violation. *any and all* are related, *each and every* are related. *each* and *every* refers to a definite and finite set (op.cit.89) *any* does not identify.

5. Animacy and agentivity

WEITENBERG (1987) discusses PIE nominal classification in the light of Old Hittite.

He defines the problem of Hittite and PIE gender in terms of nominal classification. Hittite possesses two CONCORD classes; commune and neuter. There are restrictions on nouns as being SUBJECTS of certain categories of verbs. As to CASE there are restrictions of nouns in expressing identical relational functions by means of identical morphemes. For the latter he refers to the study of STARKE (1977).

In most old IE languages NATURAL SEX and FORM allocates to concord classes. ANIMACY plays no role. In Slavonic ANIMACY is added as a motivation to the class masculine/genitive object.

MEILLET (1931) suggested that PIE had only two genders motivated by ANIMACY and based on a syntactic feature AGENS, later replaced by SUBJECT.

One reconstructs a perfectly motivated (ANIMACY) two member classification based on a syntactic feature AGENS (p.217)

WEITENBERG follows STARKE (1977) as regards the absence of the morphemes *-a, -az* and *-it* for the "Personenklasse", which makes

for a special class of commune nouns that are inanimate, and he therefore considers SUBJECT and CASE to be syntactically relevant in Hittite as well as CONCORD. Concord class neuter nouns are restricted as to SUBJECT.

There was, according to WEITENBERG, an OH 3 member system with a protofeminine, which was inanimate (p. 225) The protofeminine non-neuter inanimate had no restriction as to subjecthood.

ANIMACY had not yet developed into NATURAL SEX as in other IE languages.

According to WEITENBERG it cannot be excluded that the original motivation for PIE nominal classification was related to the feature SUBJECT (p.226).

The singulative and decollectivizing *-ant-* permits an *agentive* function, which allows for *subjecthood* and nominative case form. A neuter is thereby transformed to a non-neuter and will belong either to a protofeminine or proto-masculine category if we accept the view of WEITENBERG. Addition of *-ant-* makes it possible for an inanimate noun to pass into the ANIMACY category (and thus to Hittite class I according to WEITENBERG, corresponding to masc./fem. in other languages).

The possibility of a class II inanimate (but non-neuter) proto-feminine of WEITENBERG, which allows for subjecthood, should not be entirely excluded as a domain in which an *-anza* form may be at home (agentive function and capacity for subjecthood, but no animacy).

If Hittite has proto-feminine nouns they might function in the same way as feminine abstracts in other IE languages. *kast-* as well as other nouns with the suffix *-t* would in that case belong to this category. Other IE languages have *-ti-* abstracts. *kusduwanza* in the vocabulary passages may then be explained as belonging to class II.

Verbal nouns with *-atar* belong to class III. They are noncount nouns. If, as we have suggested, there are nomina actionis ending in *-anza* that refer to individual actions, they are decollectivized but nevertheless inanimate (class II).

Typologically these would have something in common with the *-ing-* formations of English which may refer to a particular single instance of an action, like *beating* or *happening,* but also to activity and general practice.

Speculations as to the possible existence of a proto-feminine do not belong to the most fundamental issues regarding the functional domain of *-ant-*. We may, however, compare the Arabic suffix *-at-,* which forms *nomina unitatis* and *nomina vicis,* and it could therefore be of some interest to mention, as does KNOBLOCH (1985), that the same Arabic suffix also forms a feminine.

It is highly interesting that not only the categories of AGENS, CASE, GENDER and NUMBER, but also those of indefinite SPECIFIC, which is related to DEFINITE are all tied together in the domain of the Hittite suffix *-ant-*.

The lexical morpheme may make the word pass from one grammatical category to another and modify the syntactical possibilities of the word in the phrase, and it may thus play a syntactical role. An important discussion of theories about the semantic and syntactic roles of suffixes is found in FRUYT (1984, 255-264): There are purely semantic suffixes and purely syntactic ones. But they belong to a *continuum.* FRUYT (1985) stresses the fact that suffixal "function" composed of syntactic and semantic elements falls into one of three categories: suffixes with a purely syntactic function, which cause a change of grammatical category or part of speech, such with a purely semantic function and such with both a syntactic and a semantic function. Suffixes that are both syntactic and semantic are especially interesting because of the functional development and extensions that they go through, due to their strong semantic value. (p.495). One of the syntactic and semantic suffixes, which forms adjectives, is that of the Latin present participle in *-nt-,* which has the semantic value of agent (p.495).

The Hittite suffix *-ant- is* a multifunctional derivational morpheme used for lexical creation, but this morpheme also plays a syntactic role, most importantly in facilitating function as Instigator in effective construction and entrance into a role as SUBJECT.

The explanation of the syntactic function given by GARRETT in the framework of his ergative theory and its connection with transitive, non-accusative or non-ergative character of the verb will not be invalidated by this fact. Its general tenets receive support (mutatis mutandis) by investigations such as MCCLOSKEY (1996) about subjects and subject positions in Irish. Case assignment as discussed by MCCLOSKEY may be of relevance to the question of the relation between nominative subjects and the possibility of a presence of an *-anza* of ablatival origin as well, which is, according to GARRETT, the only

origin compatible with the use of the clitic subject pronouns in the manner observed by him. This *-anza* would then have been reanalyzed as derivational, as GARRETT suggests (1990a, 65), but probably also as nominative. The functional range of derivational *-ant-*, which included agentivity, would have facilitated the reanalysis.

The highly productive suffix *-ant-,* singulative and decollectivizing as well as agentive, and also possessing other functions, came to cover a great *continuum,* which contains an internal logic and allows insight into a system of affinity between semantic and grammatical categories.

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Archaic Features of Indo-European Word-Formation

The Greek and Old Indic type τόμος - τομός in a PIE perspective[1]

KONSTANTIN KRASUKHIN

0. Word-formation may be defined by the following features:

0.1. The meaning of suffixes is fuzzy. The same affix may be added to several roots to form new words with a non-homogenous meaning. E.g. Engl. *stretch* - *stretcher* (instrument noun), *stream* - *streamer* (noun designating the result of an action), *trap* - *trapper* (agent noun). In Russian one may observe a chain of derived words with the same suffix added to roots with similar semantic features, and still the meanings of the derivatives are extremely variegated: *utro* 'morning' - *utrennik* 'morning performance, matinée'; *den'* 'day' - *dnevnik* 'diary, journal'; *večer* 'evening' - *večernik* 'night-school student'; *noč'* 'night' - *noč'nik* 'night-light' (cf. PANOV 1956). Thus the suffix *-nik-* means 'pertaining to', but its realization in concrete words leads to differing results.

0.2. Suffixation is not absolutely free, and roots having similar morphological characteristics may be combined with different suffixes. Cf. Latin *verus* 'true' - *veritas* 'truth', *amplus* 'wide, broad' - *amplitudo* 'width, breadth' (forms as **veritudo*, **amplitas* do not contradict the laws of Latin word-fomation, but they are unattested in Latin texts). Cf. also Russian *čitat'* 'to read' - *čitatel'* 'a reader', *igrat'* 'to play' - *igrok*, *igrun* 'player', while **čitun*, **igratel'* are unattested.

0.3. Word-formation is connected with inflection. The same affix may occur as a stem-formation and as an inflection. The Germanic suffix of the active participle *-nd* has the same origin as the suffix in German *Rind* 'cattle' (< IE **k̂r-énd-* 'having horns', from **k̂er-* 'horn', cf. Greek κέρας), i.e. the suffix *-nd-* is inflectional in such participles as

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Goth. *baírands* 'carrying', German *gebährend* 'bearing', but, from a historical point of view, derivational in the word *Rind*. Some inflectional endings of oblique cases in Indo-European languages are connected with word-formation: The affix *-b^h- is part of the inflectional endings in Old Indic inst.pl. *-bhis*, dat.pl. *-bhyas*, Mycenean inst. *-pi*, dat. of the Latin personal pronoun *ti-bi* (Old Indic *tubhyam*), reflexive *si-bi*, also dat.abl. *nobis*, *vobis* (Old Indic *asmā́bhyām* 'to us', *yuṣmā́bhyam* 'to you', *asmā́bhis* 'by us', *yuṣmā́bhis* 'by you'). The suffix has an adverbial function in Homeric *βίηφι* 'by force, with force, to force'. In Greek it is also the basis of a new pronoun, pl. *σφεῖς* (< *s-b^hei-es) "they", which contains the same chain of morphemes, as Lat. *sibi* (the root *se- is also attested in the singular ἕ (< *se-d) "oneself", cf. Latin *se* (< *sed)), and the same sequence of morphemes may be observed in Old Indic *sabhā* "family" and German *Sippe*.

An important example is found in the Latin adverb *pessum* 'down, downwards' < *ped-su-m: the root *ped- 'foot; bottom' + the morpheme *-su, which is attested as the inflectional ending of the loc. pl. in the Eastern Indo-European Languages: OI *áśve-ṣu*, Av. *aspaē-šu* 'in, among the horses', OP *madaišuva* 'in, among the Medes', Gk. *θηρ-σί*, OCS *zvěrъxъ*, Lith. *žvėrišè* 'in, among the beasts'.[2] In Latin the locative merged with the ablative and instrumental, and the inflectional ending *-su is unattested while the the adverbial meaning of this morpheme remains.

0.4. According to J. KURYŁOWICZ (1964), inflectional and derivational categories are in opposition to each other. The former categories are united in grammatical paradigms, which are stable systems; the latter are unconnected with such paradigms; they do not suffer the influence of the system, and for this reason they may preserve morphological and semantic archaisms. Such oppositions were studied in detail in the Russian linguistic tradition. V.A. BOGORODITSKY (1939: 200) called the two categories "derivation" (word-formation) and "motion" (inflection), A.A. REFORMATSKY "derivation" and "relation" (1967: 250-253). Both scholars stressed the exact meaning of relational morphemes vs. the fuzzy meaning of derivational ones. One can see the process of transition from "relation" to "derivation" in living languages: Russ. *vesnoi*

[2] The timbre of the vowel is changed in Greek and Lithuanian in analogy with the loc.sg.: Gk. *θηρ-ί*, Lith. *žveryjè*.

is the instrumental of *vesna* 'spring', but it may also have the adverbial meaning 'in springtime'.

1. A well-known derivational pattern in Ancient Greek and Old Indic is the *τόμος/τομός* type. The barytone noun is the nomen actionis or resultatis: *τόμος* means 'slice, piece' (i.e. 'that which is cut, carved'); the corresponding oxytone means the author of the action, the instrument, or having the action as one's characteristic: *τομός* 'cutting, carving, sharp, burning' (*τέμνω* 'cut, carve'). This type of word-formation is based on accent shift alone, without an additional morpheme. It is found only in Greek and Vedic, languages which have a mobile stress. The alternating accent in Balto-Slavic is connected with the intonation of the underlying morpheme (Fortunatov-Saussure's Law), and with the character of the paradigm (mobile/immobile). In general, accentuation only plays a minor role in Balto-Slavic word-formation.[3] The Hittite data are few in number and still insufficiently investigated. So the question arises: Is the *τόμος/τομός*-pattern an old model of word-formation, or is it a Greek-Aryan innovation? To answer this question we must consider the material and try to find parallels in other IE languages.

1.1. Most of the nouns of this type are connected with verbal roots. One may mention such pairs as Greek *τρόχος* 'run, race – *τροχός* 'wheel, running' (*τρέχω* 'run'), *φόρος* 'burden' – *φορός* 'carrying' (*φέρω* 'carry'), *μόλπος* 'tune' – *μολποί* 'a college of musicians in the town of Miletos' (*μέλπω* 'sing'). From Old Indic: *códa-* 'lash, stimulus' – *codá-* 'who incites, animates' (*códati* 'incites'), *jámbha-* 'tooth' (cf. Gk. *γόμφος* 'peg, nail', OCS *zǫbъ* 'tooth') – *jambhá-* 'crushing, chewing' (*jámbhati* 'snaps at', *jambháyati* 'crushes'), *kránda-* 'cry' – *klandá-* 'crying' (*kr̥ndate, klandate* 'cries'). The derivational model is clear: the verb corresponds both to the barytone action noun (or noun denoting the result of an action or an inanimate instrument), and to the oxytone agent noun (or noun denoting an animate being related to the action). This opposition may include more than just action nouns/agent

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[3] One may adduce Russian *zámok* 'castle' – *zamók* 'lock'. Both have the same origin with the prefix *za-*, here meaning the completion of the action, and the root *-mok-/-mk-/-myk-* 'close', but the first noun is borrowed from Polish while the second is indigenous in Russian.

nouns, cf. Gk. λεῦκος 'white salmon' – λευκός 'white, light', λεύκη 'white poplar' – λευκή 'a white one' (f.) (λεύσσω 'look' < *leuk- 'shine'), σκολιός 'curved' – σκόλιον 'the song of a circular choir'. The barytone nouns here denote something with a property; the oxytone is the noun denoting this property. Derived words as well may be included in this opposition: πότος 'drinking-bout' – ποτός 'drunk', κύρτος 'fish-trap' – κυρτός 'curved'. These nouns are derived from verbal roots (*pə- 'drink', *kr̥- 'carve') with the suffix *-to-, which is oxytone and derives the inactive participles/verbal adjectives: Gk. σχίζω 'break' – σχιστός 'broken', OI *tanóti* 'draws' – *tatás* 'drawn', and the nouns with recessive accent are created under the influence of the type τόμος – τομός.

2. We are now faced with some important questions: 1.Is the primary formation the barytone or the oxytone noun, or in other words: is the oxytone derived from the barytone or the other way round? 2. When was type τόμος – τομός established? These questions may be answered if we look at the development of PIE accentology. The early PIE accent had stress character, the later one was a pitch accent (cf. the full reconstruction of early and late PIE accentology in: FULK 1986). Therefore, the unstressed vowels in early PIE were reduced, while they remained in later IE. Thus the accent movement from τόμος to τομός cannot be very archaic. Before answering the question asked above we will have to consider the basic character of both types.

3.1. In Greek oxytone nouns vary both formally and semantically: They may have root vocalism *0*, *e*, *a* or *o*: *0* in στιλβός 'shining' (στίλβω), ἑλικός 'turning' (ἑλίσσω), σφακός 'bee-like' (σφάζω 'sting, bite'; the full grade is attested in σφήξ 'bee'); *e*- in φειδός 'stingy' (φείδω 'take care, guard'), λευκός 'white, light' (λεύσσω 'see'); *a*- in ταγός 'chief' (τάσσω 'place, arrange; order, command'), αἰθός 'warmth, heat' (αἴθω 'burn'), σφαλός 'unsteady' (σφάλλω 'I reel, am unsteady'), ἀγός 'leader' (ἄγω 'lead' probably an old *e*- grade; *o*-grade in ὄγμος 'furrow'). It may be observed that the vocalism in these nouns is similar to that of the corresponding verb, and there are examples of a direct influence from the verb on the noun in such cases as θαλλός (< *θαλιός) 'sprouting twig' (θάλλω < *θάλῐω 'bloom'), βοσκός 'herdsman' (βόσκω 'pasture') which show typical verbal suffixes (*-io-, *-sk̂o-); note also that both the noun and the verb have zero grade in

the root, cf. the perfect *τέθηλα* and the nouns *βώτωρ*, *βωτήρ* 'herdsman'.

3.2. In many cases, however, the vocalism of the noun differs from that of the verb:

A. Roots of the structure *CVC* (*C* - consonant, *V* - vowel): *βορός* 'voracious' (*βιβρώσκω* 'eat'; cf. Lat. *carni-vorus* 'carnivorous', OI *aja-gará-* 'goat-eating', Av. *aspo-gara-* 'horse-eating'), *δορός* 'stripped' (*δέρω* 'strip'), *θοός* 'swift' (*θέω* 'run'), *θορός* 'sperm' (*θρῴσκω* 'jump'), *λοπός* 'shell' (*λέπω* 'strip'), *σκοπός* 'guard; goal' (*σκέπτομαι* 'see, look'), *τορός* 'piercing, loud' (*τείρω* < **ter-i̯ō* 'rub; bore'), *φονός* (**g^wh^onós*) 'murderous' (*θείνω* < **g^wh^en-i̯ō* 'kill'), *φορός* (*φέρω*). There are also cases where the meaning of the noun is far removed from the verb: *ὀδός* (< **sodós*) 'way, road' (*ἵζω* < **si-sdo-* 'cause to sit').[4]

B. Roots of the structure *CVRC* (*R* - any sonorant): *δορκός* 'gazelle' (*δέρκομαι* 'see, consider'), *λοιπός* 'remaining' (*λείπω* 'remain'), *ὀλκός* 'drawing; drawn' (*ἕλκω* 'draw'), *πομπός* 'satellite' (*πέμπω* 'send'), *μολποί* 'alliance of musicians in the town of Miletos' (*μέλπω* 'play music'), *φορβόν* 'food' (*φέρβω* 'feed'). This last-mentioned oxytone noun has the meaning of action or instrument noun, which explains the neuter gender. Such nouns are more abstract than the masculines, cf. *λοιπός* – *λοιπόν* 'future'. Thus *φορβόν* gives reason to postulate a masculine **φορβός* 'feeding'.

C. Roots of the structure *VCVC*/*VCVRC*: *ἀμοιβός* 'changing' (*ἀμείβω* 'change'), *ἀμολγός* 'evening' (time of milking, *ἀμέλγω* 'milk'), *ἀρωγός* 'helper' (*ἀρήγω*). There are two nouns with zero-grade in the root that are connected with verbal roots in the full grade: *στραβός* < **στρ̥βός*) 'slanting; oblique' (*στροβέω* 'turn', a frequentative verb from an unattested **στρέβω*, cf. *φορέω* – *φέρω*), and the gloss *ἰδός· ὀδός, σῶμα* (Hes.) 'way, body' = 'visible object' (*ἰδεῖν* 'see'). Furthermore, *βορός*, *θορός* and *τορός* may also be considered zero- grade roots: They have a laryngeal in auslaut: **g^w^er-h₃-*, **ter-h₃-*, and in Greek the phoneme sequence **CR̥h₃-* is changed to *CoR(o)-* before vowel, cf. the the-

[4] The root **sed-* could mean not only 'make sit, sit', but also 'move', cf. Russ. *sidet'* 'sit', but *xod* (< **sod-*) 'going;, procession', *šël* (< **xed-l-* < **sed-*) 'went', *xodit'* 'walk'.

matic aorists ἔπορον 'I gave' (*pr̥h₃-o-m), ἔθορον 'I jumped' (*dʰr̥h₃-o-m), ἔμολον 'I came' (*ml̥h₃-om); cf BEEKES 1969: 234; 240). In Greek these zero grades coincide with the *o*-grade. Such oxytone nouns are derived with the accent placed on the thematic vowel, which means that the root is unstressed, and the zero-grade must be original in the root if it has the structure *CVRC*, or *CVR*. In roots with the structure *CVC* the unstressed vowel **e* changed to *o*. As demonstrated by J. KURYŁOWICZ, the change of unstressed *e* into *o* was the determining factor in the formation of oxytone verbal nouns: by analogy this feature ousted the zero grade in roots with a sonorant (KURYLOWICZ 1968: 273-4), and in oxytone nouns the *o*-grade root vocalism became predominant in Greek, while original zero-grade formations only remain as relics.

4.1. In Old Indic the regularization of oxytone nouns is not as radical as in Greek: on the one hand we find about a hundred nouns with full grade, on the other some nouns do have the zero-grade: *īśá-* 'commanding' (*īśte* 'possesses'), *piśá-* 'motley deer' (*piṁśáti* 'adorns'), *bhujá-* 'trunk' (*bhójati* 'bends'), *bhr̥má-* 'confusion' (*bhrámati* 'wanders'), *rujá-* 'breaking' (*rujáti* 'breaks'), *vr̥dhá-* 'prosperity' (*várdhati* 'grows'), *śucá-* 'bright', *śuká-* 'parrot' (*śócati* 'shines, sparkles'). Some nouns have counterparts with full grade, which can differ semantically from the zero-grade formations: *bhr̥má-* – *bhramá-* 'moving', *bhujá-* – *bhogá-* 'ring', also *rucá-* 'light, shining', *roká-* 'light, radiance' (*rócate* 'shines'), i.e., nouns with a full grade have a tendency to denote abstracts and to converge with barytone nouns. Another feature is worth noticing: The thematic vowel in some nouns has the *e*-timbre: *bhujá-* < **bhug-é-*, *śucá-* < **kuk-é-*, *rucá-* < **luk-é-*, but *bhogá-* < **bʰougʰ-ó-*, *śuká-* < **kuk-ó-*, *roká-* < **louk-ó-*. Evidently the nouns with a thematic vowel *e* tend to denote concrete concepts, animates and adjectives, and the nouns with *o*-vowel denote abstract concepts and substantives. This is an important feature, which will be explained when we have considered the oxytone and barytones types.

4.1.1. The number of full-grade oxytone nouns in Old Indic is not small: *meghá-* 'pool' (*méhati* 'urinates'), *deśá-* 'country' (*diśáti* 'shows, brings forward'), *yodhá-* 'fighting, a warrior' (*yudhyáti* 'fights'), *darśá-* 'seeing' (*dr̥ś-* 'see'), *darbhá-* 'bunch of grass' (*dr̥bháti* 'bundles'). The timbre of the vowels in roots of the structure *CVRC* is hard to define;

in roots of the type *CVC/CVR* there is lengthening of the root vowel: *bhārá-* 'burden' (*bhárati*), *nādá-* 'noise' (*nádati* 'sounds'), a lengthening which may be due to Brugmann's Law. Such nouns often have the meaning of nomina actionis in opposition to the nouns with a short vowel, cf. *nadá-* 'crying'. In general, the Old Indic system of oxytone nouns is less homogenous than Old Greek one. It is characterized by the occurrence of both old zero grades and new full grades.

4.2. Oxytone nouns in Greek have various meanings. In a number of linguistic works they are characterized as concrete nouns, agent nouns, adjectives (CHANTRAINE 1933: 34-7; BOLELLI 1950; GAGNEPAIN 1959: 37-8). These characterizations are real, but incomplete. It is possible to distinguish between the following classes of oxytone nouns.[5] 1. Nomina agentis and/or instrumenti) (i.e. animate/inanimate): *ἀοιδός* 'singer' (*ἀείδω* 'sing'), *μολποί* (*μέλπω*), *δορός* 'gazelle' (*δέρκομαι* 'see'); *θορός* 'sperm' (*θρῴσκω*), *κομπός* 'boaster' (*κομπέω* 'boast; make a noise'), *ὀχός* 'firm, secure' (*ἔχω* 'hold'), *τροχός* (*τρέχω*), *δοκός* 'rafter' (= 'holding'; *δέχομαι*, Ion. *δέκομαι* 'hold'), *τομός* (*τέμνω*), *τροπός* 'leathern thong for oars' (*τρέπω* 'turn'). 2. Active adjectives ("zweier Endungen"): *ἀμοργός* 'repelling' (*ἀμέργω* 'repel'), *τροφός* 'feeding' (*τρέφω* 'feed'), *φονός* (*θείνω*, *φονεύω*), *θοός* 'swift' (*θέω* 'run'), *τορός* (*τείρω*). 3a) nouns of result: *δορός*, *δοχός* 'containing, capable of holding' (*δέχομαι*),[6] *δροπός* 'broken off' (*δρέπω* 'break off, pick (flowers)'), *ἰδός*˙ *ὀδός*, *σῶμα* (Hes.) ('visible'), *λοχός* 'lying' (*λέχω* 'lay; lie'), *λοιπός*, *λοπός* 'shell' ('ragged') (*λέπω* 'peel'). 3b) Nouns denoting place and time of the action: *ἀμολγός* 'evening' = 'time of milking' (*ἀμέλγω* 'milk'), *νομός* 'pasture' = 'place of living' (*νέμω* 'live, dwell', *νομάς* 'nomad'). Some nouns have several meanings: *σκοπός* 'guard' and 'goal' (*σκέπτομαι* 'look') is familiar to students of Greek. The polysemy of the noun *ὀλκός* (*ἕλκω* 'draw') is very instructive: 1) 'drawing' (active adjective); 2) *ὀλκοί*˙ *λύκοι* (Hes.) 'wolves'; 3) 'rein'; 4) 'winch' (both 3) and 4) are instrument nouns); 5) 'snake' (= 'creeping', i.e. 'drawing itself'); 6) 'furrow' (noun of result); 7) 'roadstead'

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[5] All our lists here are non absolutely complete. The whole material of barytone and oxytone "root-nouns" requires a separate monograph.

[6] The semantic difference between *δοκός* 'rafter' (instrument noun from the variant *δεκ-*) vs. *δοχός* (a resultative adjective, from *δεχ-*) is important in showing that derivational categories are not stable structures. The meaning of individual elements is labile.

(result or place). Thus the meaning of this noun encompasses the whole semantic range of oxytone nouns.

4.3. In general Old Indic oxytone nouns correspond to these characteristics. However, they show even greater polysemy, in line with the Vedic style, which has a preference for metaphorical modes of expression, denoting creatures by their epithets. Some interesting nuances may be illustrated by Vedic textual examples.[7]

4.3.1. Agent nouns: *ajá-* 1) 'rafter, driver' (*ájati* 'leads, drives'): (1) *apā́m ajás* (III, 45, 2) 'the driver of the waters'; 2) *ajás ékapād* 'one-legged driver', epithet of Vr̥tra: (2) *áhir budhníyo ajás ékapād* (II, 31, 6) 'Snake of Depth, one-legged driver'; 3) a primordial god, driver-creator of the World: (3) *ajó ná kṣā́m dādhā́ra pr̥thivī́m* (Indra) (I, 67, 5) '(Indra) strengthened the Broad Earth as (primary) Creator'.

ghaná- 'murderer, slayer' (*hánti* 'strikes, slays, kills'): (4) *ghanó vrtrā́ṇām abhavaḥ* (I, 4, 8) 'you became the slayer of Vr̥tra'. But in the following context the meaning is turned into an abstract: (5) *śréṣṭho ghané vr̥trā́nāṃ sanáye dhánānām* (VI, 26, 8) 'the better in slaying Vr̥tra, in gaining treasures'. The formulaic character of the syntagm *ghaná vr̥trā́nām* is evident.

bhaṅgá- 'breaker' (*bhanákti* 'breaks') (6) *úpo ṣu jātám aptúraṃ góbhir bhaṅgám páriṣkr̥tam índum devā́ ayāsiṣuḥ* (IX, 61, 13) 'The Gods with cows came to the created, active breaker, to the drop (of Soma)'.

mr̥gá- 'game, deer, wild beast' (probably from *mā́rṣṭi*, *marjati* 'wipes'). This noun is often connected with epithets: *mr̥gás ... bhīmás* (I, 190, 3) 'terrible animal' = 'lion'; *mr̥gám mahiṣám* (VIII, 69, 15) 'large animal' = 'buffalo', *mr̥gá hastī́* (IV, 16, 14) 'animal with a hand' = 'elephant'; *mr̥gá vāraṇás* 'strong animal' (VIII, 33, 8) = 'elephant'.

meghá- '(rain-)cloud' (*méhati* 'mingit' < 'pours'). The following is an instructive context, showing the functioning of oxytone agent nouns: (7) *vŕ̥ṣā vām meghó vŕ̥ṣanā pipāya* (I, 181, 8) 'the rain-cloud (or bull-cloud) abounded (swelled) with rain', i.e. the rain generates the cloud and vice versa: the cloud is the source of rain, i.e., the

[7] The Rigveda is cited according to: Rig Veda. A metrically restored text with an introduction and notes, ed. by B.A. van NOOTEN and G.B. HOLLAND, Cambridge (MA), 1994 (*Harvard Oriental Studies*, V, 50).

noun *meghá-* may be considered as both the generator and the result of the rain process. Its Greek counterpart, *μοιχός* 'adulterer' (*μοιχάω* 'seduce; fornicate') is an agent noun, and the frequentative-causative verb suggests a primary **μείχω* 'ejaculate sperm'. So the descendants of the same lexeme may develop in several directions. Gk. *μοιχός* designates the agent as having a specific characteristic; OI *meghá-* has lost this connection. If the primary function of oxytones is the designation of epithets the Greek noun is closer to the prototypical oxytone than the corresponding Old Indic. The contrast between them shows the ways such forms may change semantically.

Moreover, we can enumerate such agent nouns as *āná-* 'mouth' (= 'breathing') (*ániti* 'breathes'), *todá-* 'driver' (*tudáti* 'pushes, thrusts'), *nadá-* 'bull' (= 'roaring') (*nádati* 'makes a noise'; also with lengthened grade: *nāda-* 'noise', noun of result), *bhramá-* 'revolving, wandering fire, will-o'-the-wisp' (*bhramati* 'wanders'), *rebhá-* 'singer' (*rébhati* 'sings'), *śaśá-* 'hare' (*śáśati* 'leaps').

4.3.2. Instrument nouns: *plavá-* 'ship, boat' (*plávati* 'floats'), *mr̥kṣá-* 'currycomb' (*mr̥kṣánti* 'they stroke'), *vāká-* 'voice' (*vívakti* 'speaks'); such nouns may also be treated as resultatives: *yugám* 'yoke' (*yunákti* 'joins'), *śará-* "arrow" (*śr̥ṇā́ti* 'crushes').

4.3.3. Adjectives with active meaning: *bheṣajá-* 'healing, curative' (*bhiṣaj-* 'physician', *bhiṣákti* 'heals'): (8) *kúva syá te rudara mr̥̄ḷayā́kur hásto yó ásti bheṣajó jálāṣas* (II, 33, 7) 'where is your hand, O Rudra, which is healing (and) curative?'. This adjective is placed after the substantive, and describes the topical quality (dependent on the context). It corresponds to the meaning of the question 'where is?', implying 'it isn't here now'. The neuter *bheṣajám* means 'drug; treatment', i.e. instrument.

bhojá- 'generous' (= 'giving joy') (*bhunákti*, *bhuñjáti*, *bhuṅkté* 'rejoyces'): (9) *sómebhir … pr̥ṇatā bhojám índram* (II, 14, 10) 'May you fill with Soma the generous Indra'; (10) *bhojā́ áṅgiraso … divás putrā́so* (III, 53, 7) 'generous Angirases, sons of Heaven'; (11) *bhojáḥ sūrír yó áhrayaḥ* (VIII, 70, 13). Thus it is an adjective denoting a stable quality of the subject.

bhrājá- 'shining' (*bhrā́jati* 'shines, is radiant'): (12) *viśva-bhrā́ḍ bhrājó máhi sū́ryo dr̥śá urú paprathe sáha ójo ácyutam* (X, 170, 3) 'all-(ever-)shining, strongly radiant Sun for seeing widely spread (his) force (and) unconquerable might'. The noun *viśva-bhrā́j-* with the

adjective *bhrā́já-* contains a figura etymologica; the former is athematic, the latter oxytone. The oxytone derivative has a very obvious function as an epithet. This syntagm is parallel to *sū́rya dr̥śé* 'Sun for seeing'; *dr̥śé* is an infinitive with the the inflectional ending of an oxytone dative. Such infinitive syntagms denote potential qualities and potential actions which may influence the subject, or events which may co-occur with the subject. They have the same origin as oxytone nouns (KRASUKHIN 1996), and it is possible to see the semantic affinity in the cited context.

vr̥dhá- 'lively' (*várdhati* 'grows'): (13) *ásad yátha mahatí vr̥tratū́rya índro viśvā́yur avitā́ vr̥dháś ca* (VI, 34, 5) 'when Indra was in great slaying of Vr̥tra, long-living, beloved, lively (mighty, strong)'. In this context all epithets follow the noun, with the meaning of qualities which may occur in certain situations, in the course of time. But there is also a context with an abstract meaning: (14) *ródasī ... cakriré vr̥dhé* (I, 85, 1) 'they made both worlds for advantage (strengthening)'. A translation 'for (the) strengthened (mighty) (one)' is less certain. Here one may assume a substantive such as **vr̥dhám* 'advantage, strengthening'.

śākā́- 'strong' (*śaknóti* 'is able'): (15) *śā́kmanā śākó aruṇáḥ suparṇá* (X, 55, 6) 'strong with the force Bright (= Indra) with good wings'; here the epithet *śākā́-* is strengthened by the noun *śā́kman* from the same root; (16) *sám índra gā́ ajayat sám híraṇyā ... ebhír nŕ̥bhir nŕ̥tamo asyá śākaí* (IV, 17, 11) 'Indra drove all cows (and) gold together with strong men (Maruts)'. As in (8-10) the adjective *śākā́-* here denotes a stable quality of a creature. In a comparable context, but with omitted defined noun we may compare (17): *sám tā́ índro asr̥jad asya śākaír yád īm sómāsaḥ súṣutā ámandan* (V, 30, 10) 'Indra with strong (men) was generous, when the well-pressed Soma inspired him'. Thus the sequence *índra ... śā́kais* is formulaic.

śuca- 'shining' (*śocati* 'shines'): (18) *ādhī́ṣamāṇāyāḥ pátis śucā́yāś ca sucásya ca ... ávinaam ā́ vā́sāṁsi mármr̥jat* (X, 26, 6) 'the lord of the yearning, the female shining one and the male shining one cleansed the wool (skin) of sheep'. In (18) the adjective takes the position of the substantive.

Other active adjective are: *āmá-* 'raw' (*amīti* 'breaks; injures'), cf. Gk. ὠμός;[8] *īśá-* 'ordering, commanding' (*īṣṭe* 'is master;

[8] Cf. Russ. *syrói* 'raw' – *suróvyi* 'severe'. The tertium comparationis is *surovaia nit', tkan'* 'unbleached (i.e. unprepared) thread, cloth'.

possesses'); *kará-* 'making, active, energetic', also an instrument noun 'hand' (*kr̥ṇóti*, *karati* 'makes'); *krīḍá-* 'playing, dancing, walking' (*krī́ḍati* 'plays'), *pārá-* 'going forth' (*píparti* 'passes'); *mahá-* 'great' (*mám̐hate* 'is great, bestows'); *vāśá-* 'noise' (*vāśyati* 'bellows'), *vená-* 'longing, yearning', (*vénati* 'longs'); *śūṣá-* 'moving forth forcibly'; *śvetá-* 'white' (*śvétate* 'is bright'), *sará-* 'running' (*sísarti* 'flows').

4.3.4. Nouns of result: *aṅká-* 'corner' (*añcati* 'bends'); *kartá-* 'hole, grave' (*kr̥ntáti* 'cuts'); *kr̥śá-* 'exhausted, lean' (*kr̥śyáti* 'becomes lean'); *bhāgá-* 'part, share'; *bhārá-* 'burden' (*bhárati* 'carries, bears). The barytone noun *bhára-* 'gain, prize' is derived from the same root, but there are many compounds whose second member is the oxytone *bhará-*: *antarā-bhará-* 'bringing into the middle', *puṣṭim-bhará-* 'bringing prosperity', *vajam-bhará-* 'bringing rewards', *harim-bhará-* 'carrying golden radiance'. It is important that the first element of these compounds has the case ending *-m*, the accusative marker, i.e., compounds of this type represent syntagms including a noun which is the direct object: *puṣṭim-bhará-* 'who brings prosperity'. Therefore one may suggest that there existed an active adjective or agent noun **bhará-* comparable with Greek *φορός* or Latin *igni-fer* (< **egni-bʰ(e)ros*) 'fire-carrying'. Other adjectives are: *bhavá-* 'world, birth' (*bhávati* 'becomes'); *marká-* 'eclipse' (= 'damage of the sun') (*mr̥cyáti* 'injures'), cf. *sū́raś ca marká ... babhūvā́n* (X, 27, 20) 'there was an eclipse of the sun'; *vrajá-* 'fold, enclosure, stall' (= 'twisted') (*vr̥ṇákti* 'twists'); epithets: *gómat-*, *gávya-* 'cow-', *aśvín-*, *áśvya-* 'horse-', *uṣṇá-* 'warm'; other nouns of result: *savá-* 'pressed out' (the noun with passive meaning), *sāvá-* 'pressing of Soma' (*sunóti* 'presses'); *sarjá-* 'flower garland' (*sr̥játi* 'sends off, pours out').

4.3.5. Polysemous nouns also exist with a simultaneous meaning of agent and result.

arká- (*arcati* 'shines, praises') 1) 'singer' (19) *arkó yád vo maruto havíṣmā́n gā́yad gāthám* (I, 167, 6) 'when the singer, who is making sacrifice, for you, o Maruts, sang the song'; 2) 'ray': (20) *arkás tridhā́tū rájaso vimā́no* (III, 26, 7) 'the tripartite ray which cut through the darkness'; 3) 'song'; 4) 'sun'.

vadhá-/badhá- (*vádhati* 'slays, destroys') 1) 'deadly': (21) *ádhā caná śrád dadhati tvíṣīmata índrāya vájraṃ nighánighnate vadhám* (I, 55, 5) "thus he believes (sets his heart to) the furious Indra, who throws the deadly *vajra* (lighting)'; (22) *áhan vr̥trám vr̥tratáram*

víaṁsam índro vájrena mahatā́ vadhéna (I, 32, 5) 'Indra killed the greatest, shoulderless Vr̥tra with the deadly *vajra* (lighting)'; 2) 'slayer': (23) *vīḷóś cid índro yó ásunvato vadhó marútvantaṃ sakhiyā́ya havamahe* (I, 101, 3) 'Indra, who is slayer (murderer) of strong impious (Vr̥tra), to him we are praying for friendship'. The noun here differs from the one in (21-22) by its rection: *vadhá-* + genitive.

The noun denotes inanimate objects in the following contexts: 3) "deadly weapon": (24) *āré gohā́ nr̥hā́ vadhó vo astu* (VII, 56, 17) 'let the cow-killing, man-killing weapon be far (from us)'. The interpretation of the nouns in this context may vary: 'cow-killing, man-killing weapon', or 'deadly cow-killer, man-killer', or 'deadly cow-slaughter, man-slaughter', i.e. *vadhá-* may be understood as a substantive 'weapon' or an adjective 'deadly'. Here one can see how the original epithet is transformed into a substantive. The substantival meaning is evident in (25) *vr̥trásya yád bhr̥ṣṭimátā vadhéna ní tvám índra práti ānáṃ jaghántha* (I, 52, 15) 'you has stroken, o Indra, with the jagged weapon against Vr̥tra's mouth'. 4) 'killing, murder': (26) *mr̥ḷā́ no abhí cid vadhā́d* (X, 25, 3) 'help us before (in view of) the killing'; 5) 'death': (27) *ná vā́ u devā́ḥ kṣúdham íd vadhám dadur* (X, 117, 1) 'The gods did not give hunger and death (or deadly hunger?)'; (28) *mógham ánnam vindate ápracetāḥ satyáṃ bravīmi vadhá it sá tásya* (X, 117, 6) 'the fool finds his food in vain, and I tell the truth, that it is his death'. This noun shows the way substantives may be created with agentive, and then resultative meaning: 'deadly, killing' (adjective in function of epithet) → 'killer, slayer' (agentive noun) → 'deadly weapon' (inanimate instrument noun) → 'murder, death' (the process, action noun).

Other nouns of this type are: *ardhá-* (*r̥dhnóti, r̥dhnati, r̥ṇáddhi* 'grows'): 1) 'opening'; 2) 'half' (noun of result); *tośá-* (*tóśati* 'drips'): 1) 'dripping'; 2) 'making drip'; *damá-* (*dámyati* 'controls; binds', cf. Lat. *domāre* 'restrain, subdue'): 1) 'subduing, who subdues'; 2) 'afraid'; *darśá-* (*dr̥ś-* 'see, look'[9]): 1) 'looking, seeing, who looks, sees'; 2) 'face, appearance'; 3) 'full moon'; *bandhá-* (*bandhati* 'binds'): 1) 'fetter'; 2) 'sheaf, bunch'; *bhedá-* (*bhinátti* 'splits'): 1) 'stroke'; 2) 'destruction' (noun of result); *yakṣá-* (*yákṣati* 'presses on'): 1) 'gleam, flash'; 2) 'injustice'.

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[9] This root is not attested in the present, but there is an aorist *ádr̥śat* and a perfect *dadarśa*.

4.3.6. Oxytone nouns may have the specific meaning of a subject connected with a potential action: *iná-* 'strong, active' (*inóti* 'advances upon, drives', i.e. *iná-* 'capable of advancing upon, driving'), *vará-* 'free' (*vr̥ṇā́ti* 'chooses', i.e. *vará-* 'capable of choosing').

5.1. Barytone nouns in Greek, in contrast, have a homogenous root vocalism (*o*-grade), and meaning: action nouns, nouns of result, instrument nouns: *βρόμος* 'thunder' (*βρέμω* 'thunder'), *γόνος* 'birth' (*γίγνομαι* 'I am born, become'), *δόμος* 'house' (*δέμω* 'build'), *δρόμος* 'run' (*ἔδραμον* 'I ran'; cf. OI *drámati* 'runs'), *θρόος* 'cry, noise' (*θρέομαι* 'cry'), *κόμπος* 'noise; boasting' (*κομπέω* 'make a noise; boast'), λόγος 'word; speech' (λέγω 'collect; speak'), ὄλκος 'wound, ulcer; misfortune' (ἕλκω 'pull'), ὄχος 'receptable, support' (ἔχω 'hold'), *τρόχος* 'run', *φόνος* 'murder' (*θείνω* 'kill'), *φόρος* 'burden'. There is one exception: the action noun with *e*-grade *ἔργον* 'work, business' (IE **u̯erĝ-* 'turn, push; work').

5.2. In Old Indic we find the barytone thematic nouns: *árdha-* 'half' (cf. *ardhá-*), *kráma-* 'step' (*kramati* 'strides'), *kródha-* 'anger' (*krúdhyati* 'is angry'), *kṣépa-* 'a throw' (*kṣipáti* 'throws'), *dáma-* 'house, place of residence' (cf. *damá-* and the IE cognates, Gk. *δόμος*, Lat. *domus*, OCS *domъ* 'house'), *dógha-* 'milking; yield, benefit' (*dógdhi*, *duháti* 'milks'), *bhóga-* 'benefit; prosperity, joy' (cf. *bhojá-*): (29) *nā́hám vindāmi kitavásya bhógam* (X, 34, 3) 'I do not find the benefit in the player'; (30) *hiraṇyáyam utá bhógam sasāna* (III, 34, 9) 'he reached golden prosperity'; (31) *ihá no dhehi bhógam* (X, 59, 6) 'now, give us prosperity!'; *vára-* 'best, choice' (cf. *vará-*), *várdha-* 'help', *śā́ka-* 'might' (cf. *śākā́-*), *sárga-* 'stream, flow', *prasárga-* 'movement; breach', *vi-sárga-* 'end, closing' (cf. *sarjá-* as noun of result), e.g. (32) *sárgo ná sr̥ṣṭó* (VII, 87, 1) 'as the streaming streams' (figura etymologica); (33) *yád dha prasárge trikakúm nivártad ápa drúho mā́nuṣasya dúro vaḥ* (I, 121, 4) 'when he (the cow-herd) had turned the three-peak in movement, he opened the door of people's fraud'. It is interesting to note that the oxytone *prasargá-* has a similar meaning: (34) *anyó anyám … ánu gr̥bhṇāti apā́m prasargé yád ámandiṣātām* (VII, 103, 4) 'One is greeting the other, when (therefore) both rejoiced in the stream of waters'. Other barytone nouns are: *háva-* 'call' (*havate* 'calls'), *háya-* 'horse' (*hinóti* 'sends off, spurns').

5.2.1. In general, the Old Indic system of barytone nouns is less homogenous than the Greek one: there are concrete barytone nouns and adjectives. Some scholars think that the semantic opposition is not important for nouns with more than one stress-position (LUBOTSKY 1988). In my opinion this is not convincing. The material shows. how the opposition 'agent : action', 'acting : result' defines the type *τόμος* : *τομός*. Let us now consider the exceptions from the general semantic distribution.

5.2.2. Oxytone non-agentive nouns of result, such as *pra-sargá-*, *roká-*, *nādá-*, *bhārá-*, *sāvá-* can be explained by the semantics of *o*-grade root vocalism. E. G. PULLEYBLANK (1965) has described the *o*-grade as "introvert": it characterizes the nouns and the perfect tense; in contrast, the *e*-grade ("extrovert") is the marker of the present-aorist tense. In other words, the *o*-grade denotes the state, the *e*-grade the process. The first two nouns have the thematic vowel in the *o*-grade (according to Collitz's Law), cf. *sarjá-*, *rucá-*, the three next the root in the *o*-grade (according to Brugmann's Law), cf. *nadá-*, *bhará-*, *savá-* with short *a* from PIE **e*.

5.2.3. The barytones with concrete meaning must be considered in opposition to other derivatives from the same root. E.g. *vára-* 'selected. choice' has a passive meaning while *vará-* 'free' is active. The noun *háya-* may be compared with the compound *aśva-hayá-* 'horse-driving', i.e., the barytone noun can be analysed as 'driven, spurned', a noun with a resultative-passive meaning. Now some concrete nouns with barytonesis: *sána-* 'old' (*sanóti* 'achieves, catches up'), *śáma-* 'working, exerting oneself' (*śā́myati* 'works, is active'). *Sána-* has such derivates as *sanáj-* 'old, everlasting' (*sanájā ródasī* (I,62, 7) 'everlasting world'), and *sanā́d* 'from old times', an old ablative with the original stress. The accent in the adjective could have shifted under the influence of *náva-* 'new', originating from the particle *nú* 'now'. *Śáma-* is only attested twice in the Rigveda: (35) *índro yātó ávasitasya rā́jā śámasya ca śṛṅgíṇo vájrabāhuḥ* (I, 32, 15) 'Indra, thunderbolt in hand, is king of the immovable and movable and working cattle'; (36) *ā́vaḥ śámaṃ vṛṣabháṃ túgriyāsu* (I, 33, 15) 'you helped the bull itself when it exerted itself in (the battles with) Tugrya.[10] Such contexts may be compared with Russian *zelen'-trava* 'green grass' (*zelen'*: abstract noun

[10] *Tugrya-* 'descendant of Tugra', an enemy of Indra.

'green color; verdure'), *devica-krasa* 'a beautiful girl' (*krasa* 'beauty'). In other words, in poetic language abstract nouns can take the place of epithets. In the given contexts the noun *śáma-* probably has a function of this kind; Post-Vedic *śáma-* means 'quiet', i.e. it is an abstract resultative noun.

In general the opposition between oxytones and barytones is gradual, to use TRUBETSKOY's terminology (1939: 152-4). The semantic chain is as follows:

1. Agent (substantive) →
2. Acting (adjective) →
3. Result/Capability of the action (adjective) →
4. Result (substantive) →
5. Action (substantive)

The barytone noun cannot be placed more to the left than the oxytone; barytones in the first position, and oxytones in the last position are very rare. And position 4 is the neutralization of the opposition *τόμος/τομός*: both may denote the result of the action, but oxytones can only denote the ability and potentiality. The most evident example of neutralization is the synonymous pair *prasárga-/prasargá-*. The function of abstract nouns as epithets is another reflection of the neutralization.

5.3. Thus the morpho(no)logy of the type *τόμος* is less variable, than that of the type *τομός* where all nouns have the full grade of the root vocalism, and none has the thematic vowel in the *e*-grade. At the same time their meaning is also more homogenous than in the type *τομός*: we find action nouns and nouns of result while nouns with a concrete meaning are exceptional. This confirms that E. BENVENISTE was right when he claimed that the type *τόμος* "est necessairement posterieur à *τομός* et en procède" (BENVENISTE 1935: 172). In other words: the type *τόμος* is derived from *τομός* by the shift of stress in the root vowel. The zero-grade was changed into full-grade, and the *o*- grade remained and became characteristic for verbal root-nouns.

6. We are now faced with a new question: what is the origin of the type *τομός*? In PIE there was a class of athematic root nouns with stressed root and reduced final vowel before the inflectional endings.

This vowel is retained when the accent moves to the right, i.e. in the genitive and dative: nominative **bhér*$_{e}$*s* - genitive *bh*$_{e}$*ré-s*, dative *bh*$_{e}$*ré-i*. According to PIE apophonic rules an unstressed **e* in roots of the type *CC*, *CR* changed to **o*. In some cases the genitive could hold an independent position, without its governing noun. This is the origin of the thematicization of athematic nouns which is well-attested in several IE languages. Thematic oxytone nouns are similar to the genitive of athematic nouns: Gk. *φώρ* 'thief' – gen. *φωρός* (with secondary lengthening) – *φορός*, *σκώψ*, *κώψ* 'hawk' (gen. *σκωπός*), OI *pā́d-* 'foot' – *padá-* 'step', *rúc-* 'light' – *rucá-*, *bhúj-* 'pleasure' – *bhojá-* 'generous', *yúdh-* 'battle' – *yodhá-* 'fighter'. The root vocalism of most athematic nouns is formed in accordance with the genitive, i.e. in roots of the type *CC*, *CR* there is *o*-grade, while roots of the structure *CRC* have the zero grade.

6.1. Athematic nouns are semantically even more variable than oxytones: They can designate the pure action, the result, the agent, the instrument. With some semantic differences such nouns as OI *spr̥dh-* (*spárdhati* 'wrestles; fights'), *dvíṣ-* (*dvéṣṭi* 'hates'), *mŕ̥dh-* (*márdhati* 'despises, disdains'), *srídh-* (*srédhati* 'acts insincerely') may designate 'enemy' and 'enmity, hostility' (RENOU 1952: 127). Several meanings of the same word may appear in the same context: (37) *r̥ṣidvíṣe marut-aḥ parimanyáva íṣuṃ ná sr̥jata dvíṣam* (1, 39, 10) 'send, o Maruts, the arrow (as a manifestation of) enmity (hostility) against the enemy of the r̥shi (singer)!'

6.1.1. The opposition between athematic and oxytone nouns from the same root allows us to define their semantic difference, e.g. Greek *φώρ* 'thief' – *φορός* 'carrying' and 'fair wind'. The noun 'thief' designates a concrete person, the adjective 'carrying' a characteristic of this person. The quality of 'carrying' is what defines a 'thief', but it is a piece of supplementary information for 'fair wind'. Athematic root nouns denote the whole, stable quality, which defines the entity in question. In KRASUCHIN (1996) it was demonstrated that it is possible, on the basis of athematic nouns, to reconstruct an Indo-European one-word sentence, which includes the subject, the object, and the action. A one-word sentence, which appears in different contexts as the result or instigator of an action, is an important universal principle.

As may be demonstrated on the basis of material from several IE languages there are six steps in the disintegration process of such a sentence from the proto-language: 1) Unalterables nouns, e.g. Lat. *fas*

'Divine Law' (< **bha-s-* 'shine; sound'); 2) Unalterable verbal forms in Lithuanian, designating so-called super-short actions/events, i.e. the action or event is happening instantaneously before the speaker's eyes: *kélti* 'raise' – *kìls* 'jump!', *kàlti* 'break' – *káls* 'knock!', *glaũšti* grab" – *glùšt* 'grab!'. Such forms can be used as subject and predicate. 3) Agentive adverbs: Gk. *πύξ* '(striking) with the fist' (**pug-* 'strike', cf. Latin *pungō*); *ἐπίμιξ* 'alternately; in confusion' (*μίγνυμι* 'confuse'); 4) Second part of abverbs: OI *bahú-* 'thick; many' – *bahu-dhā́-* 'much, a lot' (the element *dhā-* < **dhē-* 'put; make' functions as an adverbial marker); 5) Modal particles: Hitt. *-uar* (*ueriia-* 'speak'), OCS *dě* (**dhe-* with the specific meaning 'speak') as markers of indirect speech; 6) Special temporal terms: Lat. *nox*, Hitt. *nekuz* can be both an alternating nouns 'night', and an adverbs 'by night', see the examples in KRASUCHIN (1996).

6.2. The material allows us to classify the relations between athematics and oxytones as follows: 1. they have an identical or similar meaning: Gk. *δόρξ* = *δορκός* 'gazelle', λώψ˙ χλαμύς (Hes.) ≈ λοπός 'husk, peel, bark', OI *yú-* = *yavá-* 'moving, hurrying', *bhū́-* = *bhavá-* 'world', *míh-* 'fog, rain' ≈ *meghá-* 'cloud'. Cf. (38) *míhaḥ pavākā́ḥ prátatāḥ abhūvan* (III, 31, 20) 'there are brilliant, extensive fogs'; (39) *nā́smai vidyún ná tanyatúḥ siṣedha ná yā́m míham ákirad dhrādúnim ca* (I, 32, 13) 'The lighting, thunder, rain and hail which he created did not help him'. (38) is comparable with (7) 2. The substantives differ semantically: *pā́d-* 'foot' – *padá-* 'step' (Post-Vedic also 'foot'); *mŕ̥c-* 'insult' – *marká-* 'eclipse'. 3. The semantic variety is greater with athematic nouns: *dŕ̥ś-* 1) 'sight'; 2) 'seeing; visible' – *darśá-* 'seeing; full moon (= visible)', *díś-* 'direction; way; space, district' – *deśá-* 'district'. Athematic action or agent nouns are more widespread than oxytone adjectives, nouns denoting quality or result; below we will describe the athematic counterparts in contrast to the oxytones discussed above:

ū́rj- 1) 'strengthening drink, beverage; prayer fat', 2) 'force' (*vrājá-* 'stall'), cf. (40) *dadhikrā́vṇa iṣá ūrjó mahó yád ámanmahi marútāṃ nā́ma bhadrám* (IV, 39, 4) 'we (praised) Dadhikravan, his drink and prayer-fat, when we remembered the glorious name of the Maruts'; furthermore there is attested a formula, *ū́rjam adhatta* 'you both gave the strengthening drink'; the gods Agni and Indra are named *urjá nápāt* 'descendant of Strengthening Drink', which is in clear opposition to the resultative *vrājá-*.

bhúj- 'pleasure': (41) *mā́ ántaram̥ bhújam ā́ rīriṣo naḥ* (I, 104, 6) 'Do not deprive us of the another pleasure!'; (42) *agním īḷe bhujā́m yáviṣṭham* (X, 20, 2). 'I am praising Agni, the youngest of pleasure', i.e. this noun designates not only an abstract action, but also the god. The oxytone *bhojá-* is only attested as an epithet; cf. (10-11).

bhrā́j- 'shining, radiating; who shines, radiates'. (42) *r̥tásya sā́nāv ádhi viṣṭápi bhrā́ṭ* (X, 123, 2) 'the brilliant (Véna[11] who is) on the summit of Law'; (43) *vibhrā́ḍ br̥hát pibatu somiyám mádhu* (X, 170, 1) 'Let the brilliant (Sūrya) drink the mighty honey of Soma'. Here the meaning of *bhrā́j* comes close to the oxytone *bhrājá-*, but the context (12) shows the difference: the adjective *bhrājá-* is an epithet while *viśvabhrā́j-* is the definiendum.

6.3.1. Thematic oxytone nouns had the meaning of particular qualities of a given subject which could change in the course of time. E.g. Gk. *σκώψ*, *κώψ* 'hawk, eagle' (< 'seeing, sharp-sighted') designates the stable quality of the creature. In opposition to this *σκοπός* in both of its meanings 'guard' and 'goal' denotes such qualities as may appear in a particular situation, cf. (44) *παρὰ δὲ σκοπὸν εἷσεν … Φοίνικα* (Il. 23, 359) 'He placed Phoenix as a guard'; (45) *ὃς Τρωῶν σκοπὸς ἷζε* (Il, 2, 792) 'he sat as the guard of the Troians'. The oxytones in the Rig-Veda may also denote changeable qualities: cf. (8), (12) and (46) *nákir eṣām̥ ninditā́ mártieṣu yé asmā́kam pitáro góṣu yodhā́ḥ* (III, 39, 4) 'no one among the people will condemn the fact that our fathers are fighting (fighters) for cows'. Some nouns, Ved. *iná-*, *vará-*, Gk. *δοχός*, designate the potentiality of the subject, i.e. their meaning may be characterized as modal. Cf. a number of important passages in KRASUCHIN (1996). The origin of thematic oxytone noun is identical with that of the thematic verbs: both denote temporary, changeable events. See the details in KRASUKHIN (2000).

7. Thus the mechanism of word-formation is clear. A PIE barytone root word of the type **b^hér̥s* had the meaning of a word- sentence '(a) bearer bear(s) the burden', the oxytone **b^hr̥és* 'participant in carrying, bearing'. The model of word-formation was the rightward accent shift.

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[11] Véna is the Vedic goddess who symbolized Love, Striving; *véna r̥tásya* 'striving for the Law', cf. GRASSMANN "Sehnsucht, Verlangen".

Subsequently, after the reduction of unstressed vowels, we have the creation of word-forms like *b^hér$_o$s > *b^hér-s 'bearer; bearing; burden' and *$b^h{}_e$rés > *b^horés, and after the harmonization of the vowels, *b^horós 'participating in the bearing'. The last forms could become genitives on the basis of *b^hérs, and nouns with a concrete meaning. The basis of the athematic noun was generalized according to the model of the genitive (*CeC-* > *CoC*; *CeRC* > *CRC*), and oxytone nouns were fashioned on the pattern of roots of the structure *CC*. New abstract nouns, such as Greek *τομός*, were the result of a new leftward shift (recession) of the accent. This recessive movement of the accent paved the way for the formation of new abstract nouns with a more restricted meaning than the old athematic type. The timbre of an unstressed thematic vowel changed from *-e-* to *-o-*. Therefore the *o*-grade became connected with an abstract meaning.

7.1. The genitival type of word-formation is well-attested in many Indo-European languages as well. Hitt. *uastul* 'sin' – gen. *uastulas* also 'sinner', *taiazil* 'theft' – gen. *taiazilas* also 'thief'; Gk. *γόνυ* 'knee' – gen. *γουνός* also 'hill' (= 'with the outline of a knee'); *ἄστυ* (*ϝάστυ*) 'city' – *ἀστός* (*ϝαστϝός*) 'citizen' (old genitive form, attested in OI *vastvás*); Lat. *genus* (gen. *generis* < **geneses*) 'kin, clan, kind' – *gener* (< **genesos*) 'son-in-law, brother-in-law' (= 'member of the clan'); OI *dvár-* 'door' – gen. *durás* also 'opener'. In all these cases the basic grammatical procedure in inflection and derivation (word-formation) is the movement of the accent. The new forms derived along these principles became inflectional (genitives), or derivational forms (type *τομός*). There are further traces of accent shift in Indo-European word-formation which I shall address in another paper.[12]

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[12] Cf. KRASUCHIN, Konstantin G.: Der qualitative und quantitative Ablaut in der Nominalderivation. Akten der Arbeitstagung der Indogermanischen Gesellschaft "*Indogermanisches Nomen*" (in print).

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Zur o-Stufe im idg. Verbalsystem

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0. Die *e*-Vollstufe [R(e)] und die Nullstufe [R(z)] scheinen im Rahmen des idg. Ablautsystems besonders in der Verbalmorphologie unproblematisch zu sein und stellen gewissermaßen den Normalfall dar, ihre Verteilung korreliert (zumindest ursprünglich) mit dem Sitz des Wortakzents und ist durch diesen bedingt. Demgegenüber kann das Vorkommen von *o*-Vollstufe der Wurzel [R(o)] als eher auffällig und teilweise ungeklärt gelten; R(o) wird sogar manchmal als ein spezifisch nominales Merkmal aufgefasst.

1. Unumstritten sind nur wenige primäre Stammbildungstypen mit "regulärer" R(o). Auch hier besteht allerdings keine Einigkeit darüber, wie man das Auftreten der R(o) zu erklären habe. Es handelt sich um zwei Komplexe:

1.1. Besonders geläufig ist das in vielen Einzelsprachen noch produktive Kausativ-Iterativ des Typs **CoRC-éi̯*$^{o}/_{e}$- (4a nach *LIV*^{1}: 22f.), z.B. **u̯os-éi̯*$^{o}/_{e}$- 'anziehen, bekleiden' in heth. *wasse/a-*^{zi}, ved. *vāsáya-*^{ti} etc. zu (1.)**u̯es-* '(Kleidung) anhaben'. Irgendwie damit zusammenzuhängen scheint der Nebentyp **CṓRC-i̯*$^{o}/_{e}$- (4b nach *LIV*^{1}: 23) mit Dehnung der R(o) und bloßem **i̯e*-Suffix, der nach KLINGENSCHMITT (1978) mit *e*-dehnstufigen, akrodynamischen Wurzelpräsentien ("Nartenpräsentien") korreliert, z. B. **su̯ṓp-i̯*$^{o}/_{e}$- 'zum Schlafen bringen, einschläfern' in lat. *sōpīre*, an. *sǿfa* zu **su̯ep-* 'einschlafen'. Die R(o) wird hier aus einer nominalen Grundlage hergeleitet (z. B. SZEMERÉNYI 1996: 275; 300 mit Lit.) oder auf ein ursprünglich konsonantisches Infix zurückgeführt (RASMUSSEN 1989: 144-230 und passim), sie kann auch einfach mit der Unbetontheit der Wurzel in Verbindung gebracht werden (was freilich nur beim Haupttyp funktionieren würde).

1.2. Ähnlich verbreitet ist die R(o) bei reduplizierten Bildungen verschiedener Art. Dabei gilt die R(o) zumeist als durch den Akzent auf der Reduplikationssilbe bedingt (der später sekundär verschoben worden

sein kann), ähnlich wie auch bei Nominalsuffixen im starken Stamm nachtonig die o-Stufe eintreten kann.

Hierher gehört zum einen das typische idg. Perfekt (Typ 3a nach LIV^1: 21f.) mit der Bilderegel *Ce-CóRC- ~ *Ce-CR̥C-´, wie es z. B. vorliegt in *me-món- ~ *me-mn-: gr. μέμονα 'habe im Sinn' etc.; ohne Reduplikation ist zweifelsfrei rekonstruierbar nur der Sonderfall *u̯ói̯d- ~ *u̯id- 'wissen, kennen' (worauf ich noch zurückkommen werde).

Zum andern gehören hierher Präsentien wie jedenfalls der Typ *Cé-CoRC- ~ *Cé-CR̥C- (1g nach LIV^1: 16), vgl. *d^{h}é-d^{h}oh$_1$- ~ *d^{h}é-d^{h}h$_1$- in ved. dá-dhā-/dá-dh-^{ti}, baltoslav. *de-d- etc. sowie zwei weitere Typen, die aus verschiedenen Gründen etwas umstrittener sind:

Erstens ist dies ein mit i reduplizierter Typ *Cí-CoRC- ~ *Cí-CR̥C-, den man z. B. in ved. jígharmi (RV) < *ǵ^{h}í-g^{h}ar-mi < *g$^{(u)h}$í-g$^{(u)h}$or-mi reflektiert sehen könnte. Das i-reduplizierte Präsens ist aber wahrscheinlich eher mit R(e) als *Ci-CéRC/CR̥C- anzusetzen, wofür sich zuletzt besonders HARÐARSON (1993: 28, 30; 1997: 99-102) mit guten Argumenten ausgesprochen hat (Typ 1h nach LIV^1: 16). Dass man überhaupt zwischen einem mit -e- und einem mit -i- reduplizierten Typ unterscheiden sollte, hat schon THIEME (1929: 34f., 51-56) anhand des vedischen Materials gezeigt (vgl. auch HOFFMANN apud LÜHR 1984: 64f.[78]).

Zweitens ist zu nennen das in dieser Form klar nur im Indoiranischen ausgeprägte "Intensivum" vom Typ *CéR-CoRC- ~ *CéR-CR̥C- (6a nach LIV^1: 24f.), vgl. ved. jáṅghanti < *ǵ^{h}án-g^{h}an-ti < *g^{wh}én-g^{wh}on-ti, dessen Form und iterative, meist repetitive Funktion von SCHAEFER (1994) genau festgestellt worden ist (vgl. auch die Rezension von LUBOTSKY 1997). Sein uridg. Alter ist jedoch umstritten, da sichere und eindeutige Spuren dieser Bildung außerhalb des Iir. kaum vorliegen (vgl. auch unten).

2. In zahlreichen idg. Einzelsprachen, besonders im Germ. und Balto-sl., also im Nordosten der Indogermania, gibt es nun aber primäre Verben, die sich durch o-stufige Wurzel auszeichnen, ohne dass einer der genannten Stammbildungstypen vorläge. Wenn man von den einzelsprachlichen Bildungen aus zurücktransponiert, erhält man die folgenden Gruppen:

2.1. Athematische Wurzelbildungen finden sich vor allem im Anatolischen und Tocharischen. Sie zeigen einzelsprachlich häufig den Ablaut

R(o) : R(z), so im toch. "athematischen" Konj. I/V, vgl. z. B. B *preku ~ parkän*˚; A *pärkmār* < **prëk- ~ *pərk-* 'fragen' bzw. B *tärkaṃ ~ tarkoy*; A *tarkaṣ ~ tärkeñc* < **tërka- ~ *tərka-* 'lassen' (Schreibung des Urtoch. nach RINGE 1996) und einmal wohl auch bei einem (allerdings thematisierten) Präsens, nämlich B *keṣ-/kes-* < **kës-'ə/ë-* : A *käṣ-/käs-* < **kəs-'ə/ë-* 'erlöschen', wenn aus urtoch. **kës-/kəs-* thematisiert. Entsprechendes findet sich auch bei einigen Verben der heth. *hi*-Konj. (Typen II 1a/b, 3aα nach OETTINGER 1979), z. B. *kānk-/kank-* 'hängen', *pai-/pi-* 'geben', *au-/u-* 'sehen' (vgl. dazu MELCHERT 1994: 139, 149).

Seltener ist ein Ablaut R(o) : R(e) bezeugt, so deutlich bei OETTINGERS (1979) Typ II 1c der heth. *hi*-Konj., vor allem den Verben *karāp-/karep(p)-* 'fressen', *sākk-/sekk-* 'wissen', *asās-/ases-* 'setzen'; dazu gehört nach MELCHERT (1994: 80f.) auch *ispār-/isper-/isparr-* 'hinbreiten, niedertreten', dessen Allomorphie man lautlich auf **spórH-/*spérH-(C˚)/*spérH-(V˚)* zurückführen könne. Mit Ausnahme dieses letzteren Falles könnte allerdings rein lautlich auch R(o) : R(ē) vorliegen; hiervon geht OETTINGERs (1979: 111-15) Erklärung des Typs aus.

Unklar bleibt der Ablaut des schwachen Stammes, wenn die R(o) des starken Stammes einzelsprachlich verallgemeinert wurde, so beim toch. Präsens B *nes-*, A *naṣ-* 'sein', wenn es auf **nës-* < **nos-* (zu **nes-* 'heimkommen') zurückzuführen ist, und bei alit. *barti* 'schimpft' (jünger thematisch *barù*).

2.2. Neben diesen athematischen Bildungen erscheinen, vor allem in anderen, westlicheren und nördlicheren Sprachen, thematische Bildungen, so vielleicht (arm. Ipv. *gog* 'sage!' und *goy* 'ist' sind eher zweifelhaft) in gr. *χόω* 'häufe auf', *οἴχομαι* 'gehe (weg)'; lat. **loidō* > *lūdō* 'spiele'; air. *foaid, -foí* 'bleibt' < **wos-e-t(i)* (gegen *LIV*[1] s. v. 2.**h₂ues* kann nicht **wos-ei̯e-t(i)* vorliegen). Am häufigsten trifft man diesen Typ jedoch im Nordosten der Indogermania, vgl. die germ. Typen **malan* 'mahlen' und **gangan* 'gehen' (stark ablautend Klasse VI bzw. reduplizierend), den balt. Typ lit. *malù* 'mahle', lett. *skrabu* 'kratze, schabe' und die slav. Typen **bodǫ, *bosti* 'stechen'; **kovǫ, *kovati* 'schmieden'. Dazu könnte man vielleicht auch heth. *paddāi, paddānzi* 'graben' (*hi*-Konj. II 2a nach OETTINGER) stellen.

2.3. Als dritte Variante lassen sich *o*-stufige *j*-Präsentien feststellen, z. B. gr. *κόπτω* 'schlage, stoße' und *κρούω* 'stoße, schlage', lat. *fodiō*

'grabe', eventuell auch air. *raïd*, -rá* < **roh$_1$-i̯*$^{o}/_{e}$- 'rudern', das man mit germ. **rō-(j)*$^{a}/_{e}$- < **roh$_1$-i̯*$^{o}/_{e}$- 'rudern' zusammenstellen könnte (unsicher ist got. *wahsjan* gegenüber thematischem **wahsan* 'wachsen', weil ein altes Iterativ vorliegen könnte); der Typ tritt besonders im Baltoslavischen hervor, nämlich im balt. Typ von lett. *maļu* 'mahle', lit. *káuju* 'schlage' und den slav. Typen **borjǫ, *borti* 'kämpfen', **zobljǫ, *zobati* 'verzehren'.

3. Zusammenhang der Typen

Man hat schon lange gesehen, dass diese Verben vor allem des Germ. und Baltosl. eine auch semantisch abgrenzbare Gruppe bilden, indem hier besonders Tätigkeiten (potentiell) iterativ-intensiver Aktionsart wie 'schlagen', 'stoßen', 'kauen', 'graben', 'mahlen', 'rudern', 'gehen, schreiten' auftreten. Dies spricht dafür, dass es sich bei der R(o) nicht um eine zufällige formale Gemeinsamkeit einzelner Verben handelt, sondern um den Reflex eines auch funktional begründeten morphologischen Merkmals (vgl. GÄRTCHEN 1904; STANG 1942; HIERSCHE 1963). Man kann demnach mit einer iterativen Hauptfunktion rechnen (eine uridg. Einordnung als Präsentien ist damit wahrscheinlich).

Doch nicht nur über semantische Eigenschaften der in Frage stehenden Verben kann man etwas aussagen, sondern auch die Form kann man über das Vorliegen von R(o) hinaus noch genauer bestimmen. Besonders Christian STANG hat in seinem "Slavischen und baltischen Verbum" (1942) darauf hingewiesen, dass die baltoslavischen Daten auf athematische Stämme mit R(o) weisen, die erst sekundär mit *-$^{o}/_{e}$- oder *-i̯$^{o}/_{e}$- weitergebildet wurden, wobei oft im Slavischen ein anderes Suffix gewählt wurde als im Baltischen, ja sogar im Litauischen ein anderes als im Lettischen (lit. *kasù, malù* vs. lett. *kašu, maļu*). Demnach sind die unter 2.2. und 2.3. genannten Typen Um- bzw. Weiterbildungen der unter 2.1. genannten.

In diesem Punkt kann man heute von allgemeinem Konsens sprechen: gemäß allen Erklärungsansätzen liegen den betreffenden einzelsprachlichen Verbalstämmen athematische Präsensstämme mit R(o) im Paradigma zugrunde. Große Meinungsverschiedenheiten gibt es jedoch, sobald es darum geht, diese Bildungen an Material anderer Sprachen anzuschließen und den grundsprachlichen Ausgangspunkt genauer zu bestimmen.

4. Heute lassen sich im wesentlichen zwei Hauptansätze unterscheiden, die nun kurz vorgestellt werden sollen.

4.1. Einen schon von MEILLET (1916) begründeten Ansatz athematischer Wurzelbildungen mit Ablaut R(o) : R(e) : R(z) hatte VAILLANT (1938) mit heth. Verben der *hi*-Konjugation verbunden. JASANOFF (1979) hat dieses Konzept ausgebaut und besonders diejenigen heth. Verben verglichen, die einen Ablaut R(o) : R(e) zeigen. Die uridg. Grundlage setzt er genau nach dem Heth. an und rekonstruiert einen Stammbildungstyp R(ó)- : R(é)- mit "h_2*e*-conjugation", also den Endungen der anatol. **hai*-Konjugation bzw. des idg. Perfekts. Das Schwanken zwischen *o*-stufigen und *e*-stufigen Bildungen bei den betreffenden Verben in anderen Sprachen, das sonst in der Regel auf zwei verschiedene Verbalstämme zurückgeführt wurde (vgl. besonders STANG 1942: 42), wäre damit aus ein- und demselben Paradigma abzuleiten. In späteren Publikationen hat JASANOFF dieses Konzept noch ausgebaut, worauf hier nicht eingegangen werden muss, weil die grundsätzlichen Annahmen unverändert geblieben sind.

Der athematische Konjunktiv I/V des Tocharischen wurde von PINAULT (1989: 146) hier angeschlossen.

4.2. Das zweite Modell rechnet demgegenüber mit Reduplikationswirkung. Offenbar geht es auf Karl HOFFMANN zurück, wurde aber immer nur relativ kurz in Arbeiten seiner Schüler dargestellt, die früheste Erwähnung der Idee erscheint wohl bei LÜHR (1976: 87[27]; 1984: 64f.[78]), vgl. auch KLINGENSCHMITT (1982: 85, 216 und apud LÜHR 1984: 65[78]). Als Vorläufer lassen sich Hinweise auf Affinität zu reduplizierten Bildungen (Intensivum) bei MEILLET (1916: 189f.); STANG (1942: 42) und HIERSCHE (1963: 157f.) verstehen. Zusatzargumente hat RASMUSSEN (1985) beigebracht, indem er aufgrund der baltisch-slavischen, besonders der lettischen Akzentuierung und Intonation eine reduplikationsbedingt fehlende Laryngalvokalisierung konstatiert (z.B. lett. *kal̃t*, slav. **kőlti* < **kólh-tei̯* ← **kl̥-kólh*$_2$-, während bei ursprünglich reduplikationslosem **kólh*$_2$- vielmehr **kolə-téi̯* > lett. †*kal̃t*, slav. *†*koltì* zu erwarten gewesen wäre).

Die R(o) ist nach diesem Ansatz jedenfalls ursprünglich reduplikationsbedingt: einzelsprachlich wurden verschiedene der unter 1. genannten Präsenstypen deredupliziert und umbgebildet zu **CoRC*- ~ **CR̥C*- (worauf weitere Umbildungen folgen konnten). Nach RASMUSSEN liegt in der Regel das Intensivum zugrunde (bei ihm: **CR̥-CóRC*- ~ **CéR-CR̥C*-), KLINGENSCHMITT (1982: 85; 216 und apud

LÜHR 1984: 65[78]) rechnet dagegen auch mit den einfach *e*- und *i*-reduplizierten Typen. Das *LIV* setzt in solchen Fällen ein *e*-redupliziertes Präsens vom Typ 1g an (**Cé-CoRC/CR̥C-*).

4.3. Ein Kompromissmodell hat MOTTAUSCH (1996) in einem vornehmlich dem Germanischen gewidmeten Aufsatz vorgeschlagen: Er akzeptiert JASANOFFs Vorstellungen in Bezug auf *h_2e-Endungen und rechnet mit funktional ursprünglich intransitiven und iterativ-intensiven, "abgeleiteten" Verben; als Ablaut setzt er jedoch (gemäß den germanischen Daten) **CoRC-/CR̥C-* an und rechnet mit Reduplikation als Regelfall.

5.1. Alle diese Ansätze stoßen, so wie sie sind, auf gewisse Probleme, die nun erörtert werden sollen. Am gravierendsten sind sie beim Reduplikationsmodell. Festzustellen ist nämlich, dass in den betreffenden Fällen die Reduplikation nicht vergleichend rekonstruierbar ist.

5.1.1. Der Ansatz der Reduplikation für einen Verbalstamm ist immer dann zirkulär, wenn er nur wegen der R(o) erfolgt, sie aber nirgendwo tatsächlich bezeugt ist. Nun gibt es nur einen einzigen einigermaßen sicheren Fall von Dereduplikation eines reduplizierten Präsens mit R(o), nämlich das germ. anomale Verb **dō-* 'tun' ← *$d^hé$-d^hoh_1- (vgl. LÜHR 1984: 39f., 64f.[78f.] mit Lit.). Der Vergleich des oft auch genannten germ. starken Verbs **far-*$^a/_e$- 'fahren' mit ved. *pípar-*^{ti} 'hinüberbringen' ist problematisch, schon wegen der semantischen Differenz (s. *LIV* Anm. 3 s.v. 1.**per-*). Die sichere Evidenz beschränkt sich also auf einen Fall, der zudem nur das Germanische betrifft, also diejenige Sprache, in der reguläre Dereduplikation (außerhalb des Präsens) ohnehin am besten gesichert ist, nämlich beim starken Präteritum als Fortsetzer des reduplizierten Perfekts. Sonst ist bei den betreffenden Wurzeln nirgendwo ein einfach redupliziertes Präsens mit erhaltener Reduplikation belegt.

Es bleibt als Alternative das Intensivum, wenn man einmal voraussetzt, dass der Typ so bereits grundsprachlich war. Doch hier haben wir ebenfalls Fehlanzeige: Die einzige tatsächlich alt belegte Intensivform, die vielleicht zu einer der betreffenden Wurzeln gehören könnte, ist das frühvedische Hapax legomenon *marmartu* (RV 2,23,6), wenn es zu ^{1}*mar*^{i}- < *$melh_2$- zu stellen ist. Diese Form ist allerdings synchron und etymologisch nicht eindeutig zuzuordnen, denkbar wären auch die Wurzeln ^{2}*mar*^{i}- < *$merh_2$- (so *LIV*) oder *mard-* < *h_2merd-.

Sonst ist in keinem der im *LIV* gebuchten Fälle ein altes iir. Intensivum belegbar.

Wie steht es aber mit den indirekten Spuren, die nach RASMUSSEN (s.o.) festzustellen sind? Selbst wenn man voraussetzt, dass die dabei vorausgesetzten Lautgesetze wirklich genau so anzuerkennen sind, bleibt die Tatsache bestehen, dass alte Wurzelbetonung (d.h. potentielle Wirkung von Hirts Gesetz) bei baltoslavischen Verben keineswegs nur bei den fraglichen Verben mit R(o) auftritt, sondern auch bei R(e) erscheinen kann, vgl. lett. *bẽrt, sẽrt, veñt, vẽrt*, slav. **rjűti, *mȇlti* (unsicher sind **snűti, *trűti, *žűti*). Sondererklärungen dieser Fälle vermögen kaum zu überzeugen; am einfachsten wäre die Annahme, dass (aus noch näher zu untersuchenden Gründen) eine alte morphologische Wurzelakzentuierung vorliegt, der Akzent also nicht erst sekundär aufgrund eines konsonantisch gebliebenen Laryngals verschoben wurde. Vorstellbar wäre auch, dass z. B. die antevokalische Stammgestalt **CoRh-* verallgemeinert wurde (was zu JASANOFFs Ansatz insofern passen würde, als gerade diese bei **h_2e*-Konjugation häufig auftreten müsste). Ist für den schwachen Stamm nicht R(e)- anzusetzen, sondern R(z)-, könnte der konsonantische Laryngal auch von diesem übertragen sein: **CoRə-* ~ **CR̥h-* → **CoRh-* ~ **CR̥h-*. Als einziges Argument zugunsten von abgefallener Reduplikation ist die Akzentuierung dieser Verben jedenfalls nicht stark genug.

5.1.2. Zusätzlich erfordert dieses Modell die Annahme eines Reduplikationsverlusts, der (in den betreffenden Einzelsprachen) nicht rein lautlich bedingt sein kann.

Im Germanischen und Baltoslavischen ist dies an sich unproblematisch, vgl. die Entwicklung des Perfekts (zum germ. Prät. und zum Typ lit. *garė́ti*, slav. **gorěti*, vgl. STANG 1942: 24). Eine morphologische Beseitigung der Reduplikation lässt sich jedoch im Griechischen, Italischen (s. Präsens, Perfekt) oder Keltischen (s. Präteritum, Futur) nicht einfach annehmen. Problematisch ist sie auch im Anatolischen, denn Fälle wie heth. *wewakki, papp^{a}raszi* usw. zeigen den Erhalt alter Reduplikation, und die Reduplikation ist in verschiedener Gestalt auch als lebendiges Bildemittel durchaus gebräuchlich (vgl. z. B. heth. *kikkis-* neben *kīs-* 'werden', *lalukkess-* neben *lukkes-* 'hell werden'). Ähnliches gilt für das Toch., das beim PPP und Präteritum II regelmäßig die Reduplikation bewahrt [Korrekturnote].

Der Ansatz reduplizierter Bildungen kann somit als komparativ ungesichert gelten. Er ist ausschließlich grammatisch-funktional (iterati-

ve Aktionsart) oder theoretisch-methodisch (*entia non sunt multiplicanda*, vgl. RIX, *LIV*^{2} 37f.) zu stützen.

5.2. Demgegenüber muss das *o/e*-Modell nicht mit nur indirekt sichtbaren Merkmalen arbeiten, kommt also mit weniger schwerwiegenden Zusatzannahmen aus. Doch auch es ist nicht frei von Schwierigkeiten.

5.2.1. Zunächst ist hier die "*h_2e-Flexion" fraglich. Das bei den hier behandelten Verben gegenüber alten Perfekta abweichende Verhalten bei der Weiterentwicklung im Germ. und Baltosl. (germ. Erhalt beim Perfekt vs. Thematisierung, baltosl. Einordnung in die i/ē-Klasse vs. thematische Klassen) ist leichter zu erklären, wenn dort Aktivendungen zugrunde lagen (diese könnten freilich gemäß JASANOFF 1979: 89f. sekundär eingeführt sein). Zudem gäbe es im Iir. und Gr., wo präsentische Perfekta häufig sind, keinen Grund, warum nicht Präsentien dieser Art mit Perfektendungen erhalten sein sollten. Es finden sich dort aber keine Perfekta, die man so verstehen könnte.

Für *h_2e-Endungen spricht somit außerhalb des Anatolischen nichts, sie sind ausschließlich wegen der heth. Evidenz angesetzt. Ein zusätzliches Problem besteht darin, dass die *h_2e-Flexion funktional nicht leicht zu motivieren wäre: *h_2e-Endungen hatten vermutlich (vgl. das Perfekt) stativische Funktion (vgl. KÜMMEL 2000: 54f., 59 mit Lit.). Allerdings hat JASANOFF (1998) nun vorgeschlagen, ihnen eher eine allgemein "mediale" Funktion zuzuschreiben, von der aus man vielleicht auch iterative Tätigkeitsverben besser erklären könnte. Dies bleibt zu überdenken.

5.2.2. Das zweite Charakteristikum dieses Ansatzes, nämlich der Wechsel von R(o) : R(e) ist ebenfalls außeranatolisch nicht direkt belegt, vielmehr haben die Einzelsprachen jeweils entweder R(o) oder R(e). Und selbst das Anatolische deutet nicht einheitlich auf R(e) des schwachen Stammes: besonders die Gleichung heth. *kānk-/kank-* ≈ germ. **xanx-*$^a/_e$- 'hängen' spricht für paradigmatischen Ablaut mit R(z), für den es auch im Germanischen Indizien gibt, wie MOTTAUSCH (1996) herausgearbeitet hat, vgl. **gang-*$^a/_e$- neben **gung-*$^a/_e$- 'gehen' oder **wall-*$^a/_e$- neben **wul-*$^a/_e$- 'wallen'. Der Anschluss des toch. Konj. I/V wird zumindest erschwert, wenn man die innertocharisch vorliegende R(z) als Neuerung erklären muss (so PINAULT 1989: 146). Wesentliche Details sind also auch hier problematisch.

5.3. Beim Kompromissmodell hat man natürlich die Probleme beider Ansätze kombiniert (siehe 5.1.1, 5.1.2, 5.2.1); lediglich der Ablaut passt etwas besser als beim *o/e*-Modell zur Mehrzahl der Einzelsprachen.

6. Überdenkt man nochmals die Möglichkeiten einer empirisch basierten Entscheidung zwischen den vorliegenden Ansätzen, so geht es vor allem um zwei Merkmale:

6.1. Beim Endungssatz rechnen JASANOFF und MOTTAUSCH mit *-h_2e*-Endungen, HOFFMANN usw. dagegen mit **-mi*. Aufgrund der Einzelsprachen ist diese Alternative kaum entscheidbar: einerseits ist im Anatolischen sekundärer Übergang in die *hi*-Konjugation bei athematischen Stämmen mit R(o) nahezu zwangsläufig, wie man schon oft für verschiedene Fälle angenommen hat; andererseits kann auch ein außeranatolischer Übergang in die *mi*-Flexion als durchaus wahrscheinlich gelten (allerdings in den "Perfektsprachen" Indoiranisch und Griechisch nur mit einem großen Fragezeichen).

6.2. Was den paradigmatischen Ablaut anbelangt, geht JASANOFF von R(o) im Wechsel mit R(e) aus, R(z) muss als Ablautneuerung erklärt werden. Nach HOFFMANN und MOTTAUSCH hätten wir dagegen R(o) im Wechsel mit R(z). Vorkommende R(e) muss einem daneben stehenden Stamm des Grundverbs zugeschrieben werden. Ein solches Grundverb kann man zwar kaum je ausschließen, wirklich unabhängig belegt ist es jedoch oft auch nicht. Auch diese Alternative ist praktisch kaum entscheidbar: Einzelsprachlich ist nahezu alles Mögliche belegt, meist lassen sich weder konsequente Ablautneuerungen klar erkennen noch unabhängige Evidenz für *e*-stufige Grundverben beibringen.

7. An dieser Stelle möchte ich eine vorläufige Bilanz ziehen und dann einen eigenen Lösungsvorschlag bringen, der wiederum eine Art Kompromissmodell darstellt. Bei Gewichtung der Einwände gegen die beiden Modelle ist dem schwerwiegendsten Rechnung zu tragen:

7.1. Der Ansatz von Reduplikation ist nicht ausreichend begründet. Das wesentliche Motiv dafür war ablauttheoretisch: die R(o) ließe sich motivieren, wenn man das **o* als unbetonte Erscheinungsform des Wurzelvokals auffasste, hervorgerufen durch eine akzentuierte Reduplikations-

silbe. Der Befund der (komparativ rekonstruierten) belegten Ablautschemata des Nomens zeigt aber, dass es neben "unterstufigem" **o* auch "hochstufiges" bzw. "überstufiges" **ó* gab (z.B. beim Wurzelnomen, s. unten). Die Rechtfertigung von R(o) verlangt demnach nicht *a priori* die Zuhilfenahme einer betonten Reduplikationssilbe.

7.2. Es erscheint vorläufig besser, *mi*-Endungen des Aktivs anzusetzen, und zwar wegen der "aktiven" Bedeutung (Tätigkeitsverben) und der Fortsetzung außerhalb des Anatolischen, die nirgendwo eine Konfusion mit dem Perfekt erkennen lässt. Dies impliziert, dass die betreffenden Verben im Heth. sekundär in die *hi*-Konjugation eingeordnet worden und lässt die Frage nach dem eigentlichen Ursprung der anatolischen **hai*-Konjugation offen (hier könnte er jedenfalls nicht liegen). Dieser Punkt bleibt der schwierigste.

7.3. Das Ablautdilemma entpuppt sich bei näherem Hinsehen als ein nur scheinbares Problem. Wenn man Wurzelstämme mit R(o) des starken Stammes ansetzt und sich fragt, wie diese denn ablauten sollten, empfiehlt sich ein Blick auf bereits bekannte Wurzelstämme mit "starker" R(o), nämlich den *o*-Typ der Wurzelnomina, wie er von SCHINDLER (1972: 32-6) ermittelt worden ist. Das Material zeigt hier einen Unterschied zwischen verschiedenen Wurzelstrukturen: Am häufigsten ist eine Art "Mischtyp" mit Ablaut R(o)- ~ R(z)-, den man bei Wurzeln der Struktur *CReR-* und **eRC-* findet. Nicht ganz klar ist die Situation bei einfachem *CeR-*: dort hat man zwar Fälle von R(e)-, insgesamt scheint jedoch R(z)- schon die Regel zu sein: der Gen. Sg. **dém-s* zu **dóm-* 'Haus' ist nur (noch) in fester syntagmatischer Verbindung mit **póti-* 'Herr' bezeugt.

Damit vergleiche man nun Verbalstämme wie heth. *kānk-/kank-*, toch. Konj. **tĕrka-/tərka-*, germ. **gang-* ~ **gung-*, die die (im Uridg. wohl häufigste) Wurzelstruktur *CeRC-* aufweisen.

Der von SCHINDLER als älter angesehene Typ mit R(o)- ~ R(e)- tritt dagegen vor allem bei Wurzeln mit auf den Wurzelvokal folgendem Obstruenten auf, mit oder ohne Resonanten vor dem Wurzelvokal, also bei der Struktur *C(R)eT-*. Hierzu passen Verbalstämme wie heth. *sākk-/sekk-*, *k*^{a}*rāp-/k*^{a}*rep-*; überhaupt sind die klaren, alten Fälle des heth. *a/e*-Typs beinahe auf derartige Strukturen beschränkt.

Zusätzlich zu dem möglichen formalen Parallelismus zu den Wurzelnomina des *o*-Typs gibt es auch eine funktionale Affinität: über den Komplex der *o*-Verben haben wir schon festgestellt, dass diese ten-

denziell iterativ-durativ sind. Das erinnert an die "nuance itérative" der identisch ablautenden Wurzelnomina des Typs **pód-/ped-* (SCHINDLER 1972: 36).

Angesichts dieser Ähnlichkeiten möchte ich anregen, analog zur Übereinstimmung der "gewöhnlichen" Wurzelverben und -nomina vom Typ R(é)- : R(z)-, auch einen *o*-stufigen Typ der Wurzelverben anzusetzen.

Zu erwarten wäre demnach **C(R)óT-* ~ **C(R)eT-* neben **CóRC-* ~ **CR̥C-*; danach habe ich eine sehr knapp gehaltene Materialsammlung mit den besser belegten Verben zusammengestellt (s. Anhang); eventuell vom neuen Ansatz her unerwartete einzelsprachliche Fortsetzer sind dort mit einem Ausrufezeichen (!) markiert. Die Verteilung passt im wesentlichen zu dem hier vorgeschlagenen Modell. Unklar ist die Situation bei der eher seltenen Wurzelstruktur *CeR-*: die Belege scheinen auf *Cór-/Cer-* neben *Cóu̯-/Cu-* zu deuten, was nicht unbedingt zu den Wurzelnomina passt (vgl. *g^wóu̯-/*g^wéu̯- 'Rind'); vielleicht gab es hier Unterschiede, je nachdem ob der einfache auslautende Konsonant oder der dem Wurzelvokal folgende Resonant das entscheidende Zuordnungskriterium waren. Von Bedeutung könnte sein, dass in diesen Fällen die Wurzel in der schwachen Alternante *CR-* vor Vokal normalerweise keine ganze Silbe ausgemacht hätte.

Zu beachten ist noch: der Konjunktiv hatte wohl immer R(e), wäre also eine mögliche Quelle thematischer Umbildungen mit R(e) auch bei den Verben, die einen Ablaut R(ó)- : R(z)- aufwiesen.

7.4. Zu dem hier angesetzten primär *o*-stufigen Ablauttyp ist wahrscheinlich auch der oben erwähnte Perfekt-Sonderfall **u̯ói̯d-* ~ **u̯id-* 'wissen' zu vergleichen (worauf schon MEILLET 1916: 190 hingewiesen hat), zweifellos ein uridg. Zustandsverb mit den dazu passenden *h_2e-Endungen. Die rätselhafte Reduplikationslosigkeit könnte durchaus alt sein, zumal keiner der Versuche, sie als sekundär zu erklären, wirklich überzeugend war. Ein Indiz für die (nach SCHINDLER in einer früheren Phase zu erwartenden) *e*-Stufe des schwachen Stammes ist vielleicht im Ptz. **u̯éi̯d-u̯os-* → gr. εἰδώς erhalten. Das muss jedoch aufgrund der ursprünglichen paradigmatischen Unabhängigkeit des Partizips unsicher bleiben, denn man kann daraus nicht sicher auf einen entsprechenden Ablaut auch des finiten Verbums schließen. Auch semantisch-funktional handelt es sich bei **u̯ói̯d-* ~ **u̯id-* in Wahrheit nicht einfach um das synchron reguläre Perfekt zu √**u̯ei̯d-* 'erblicken, sehen, (finden?)'; dann wäre nämlich vielmehr auch (noch) 'im Blick haben → anblicken ~ beachten, beobachten' zu erwarten (so bei gr. δέδορκα, ὄπωπα; ved.

cikā́ya, cikéta, cacákṣa, dīdhā́ya, vgl. KÜMMEL 2000 zu √*darś*, √*cakṣ*, √*cay*, √*cet*, √*dhay*[i]). Jedenfalls scheint **u̯ói̯d-* ~ **u̯id-* einen (nicht mehr produktiven) reduplikationslosen Typ des Stativs/Perfekts vorauszusetzen, der genau wie die oben postulierten Aktionsverben eine Allomorphie R(ó-) : R(z)- bei einer Wurzelstruktur *CeRC-* zeigt.

8. Zuletzt möchte ich die aufgrund der Materialanalyse (vgl. den Anhang) wahrscheinlich anzunehmenden Entwicklungen des Typs in den Einzelsprachen andeuten, soweit dies jetzt schon möglich ist. Hier ist aber noch viel Detailarbeit zu leisten:

8.1. Im Anatolischen ist der Typ mit der alten Ablautsdistribution erhalten, wegen des Ablauts (*o*-Vokal im starken Stamm) wurde er in die **hai*-Konjugation eingegliedert.

8.2. Im Tocharischen blieb er ebenfalls erhalten, der Ablaut wurde vereinheitlicht zu R(o)- ~ R(z)- bzw. innertocharisch "*ë*-Stufe" : "*ə*-Stufe"; wie bei anderen alten, nicht mehr produktiven Präsensklassen fand ein Übergang zum Konjunktiv statt; in dieser Funktion könnte der Typ auch noch produktiv geworden sein.

8.3. Die indoiranischen Verhältnisse sind schwer zu beurteilen. Verhältnismäßig häufig scheint ein thematisches Verb zu entsprechen, das vom schwachen Stamm thematisiert sein könnte, vgl. ved. *uvé, sphuráti, tudáti, vijáte* bzw. *vásati, yátate, násate* (auch *svárati*?).

8.4. Im Griechischen scheinen sich die gleichen Weiterbildungen zu finden wie bei den anderen Wurzelpräsenstypen: 1. *j*-Ableitung vom starken (*κόπτω, κρούω* wie *θείνω, φθείρω*) oder schwachen Stamm (*κείρω, πείρω* wie *φθαίρω, ξαίνω*) oder 2. Thematisierung vom starken (*οἴχομαι, χόω* wie *φλέγω, λείχω, μήδομαι*) oder schwachen Stamm (*νέομαι, ἀέξω*?, *λύω, στένω* wie *γράφω, γλύφω, ἐλέγχω*) oder 3. Verwendung des Konjunktivstammes (*σπένδω, πένομαι* wie *λείχω, ἐλέγχω*?).

8.5. Im Lateinischen scheint Thematisierung zu überwiegen (*lūdō, luō, carrō, uorrō*), daneben selten *j*-Ableitung (*fodiō*, ?*feriō*).

8.6. Genau entsprechend verhält sich das Keltische: Thematisierung (*foaid, melid*; *craf-, mal-*) oder *j*-Abl. (*raïd**).

8.7. Im Germanischen blieb der Typ zunächst erhalten, doch wurde dann thematisiert, in der Regel vom starken Stamm (**gangan, *malan, *wallan*), selten auch vom schwachen (**gungan, *wulan*).

8.8. Auch im Baltischen müssen wir mit langer Erhaltung rechnen (alit. *barti*), später wurde jedoch meist weitergebildet, und zwar im Lit. eher thematisch, im Lett. mit *j*-Ableitung. Grundsätzlich wurde die R(o) verallgemeinert. Danebenstehende *j*-Präsentien mit R(e) können neugebildet sein, da hier ein produktiver Typ vorliegt: *blendžiù, žengiù.*

8.9. Ähnlich blieb der Typ auch im Slavischen zunächst erhalten, relativ früh wurde meist die R(o) verallgemeinert, in der Regel finden wir *j*-Ableitung, außer bei **bodǫ* und **kovǫ*.

Anhang: vorläufige Materialsammlung

1. Wurzelstruktur C(R)eT(T)-

*b^hód^hh_2- ~ *b^hed^hh_2- 'stechen, graben'	[heth. *paddai* 'gräbt'
	[lat. *fodiō, -ere* 'graben'
	[lit. *bedù*, (*bèsti*) 'stechen, graben'
	[aksl. *bodǫ*, (*bosti*) 'stechen'
*g^hrób^h- ~ *g^hreb^h- 'graben'	?[heth. *karāpi, karipanzi* 'fressen'
	[got. (+) *graban* 'graben'
	[lett. *grebju*, (*grebt*) 'schaben, aushöhlen'
	[aksl. (+) *grebǫ*, (*greti*) 'rudern; graben'
*$h_1$róh_1- ~ *$h_1$reh_1- 'rudern'	?[gr. myk. Inf. *e-re-e* /*ereen*/ 'rudern'
	?[lit. *iriù*, (*ìrti*) 'rudern' (!)
	[air. *raït* 'sie rudern'
	[an. *róa*, ae. *rōwan* 'rudern'
*h_2u̯óks- ~ *h_2u̯eks- 'wachsen'	[ved. *ukṣámāṇa*- 'wachsend' (!)
	?[gr. hom. *ἀέξομαι* 'wachse', *ἀέξω* 'mehre'
	[an. (+) *vaxa* 'wachsen' (got. *wahsjan*?)
*h_2u̯ós- ~ *h_2u̯es- 'verweilen'	?[heth. *huiszi* 'lebt'
	[ved. *vásati* 'übernachtet, verweilt'

	[jav. *vaŋhaiti* 'weilt' [got. (+) *wisan* 'sein, weilen, bleiben' [air. *foaid* 'übernachtet, bleibt' arm. *goy* 'ist, existiert'
**i̯ót- ~ *i̯et-* 'sich fest hinstellen'	?ved. *yatāná-* 'fest hingestellt', [*yátate* 'stellt sich fest hin' ?[lat. *nītor, -ī* 'sich aufstemmen' [toch. Konj. B *yātaṃ*, A *yātaṣ* 'imstande sein'
**kóp- ~ *kep-* 'hauen, hacken'	[gr. *κόπτω* 'schlage, stoße' ?[lit. *kapù*, (*kàpti*) 'hauen, hacken' (belegt?) ?[aksl. *kopajǫ*, (*kopati*) 'graben; hacken' ?[alb. *kep* 'behaut; hackt'
**kós- ~ *kes-* 'kratzen, kämmen'	?[heth. *kiszi* 'kämmt', *kissir* 'kämmten' (!) [lit. *kasù*, (*kàsti*) 'graben, scharren' ?[aksl. *kosnǫti sę*, Aor. *kose* 'berühren' ?[aksl. (+) *češǫ*, (*česati*) 'kämmen'
**nós- ~ *nes-* 'heimkommen'	toch. Präs. B *nesau*, A *nasam* 'bin' [ved. *násate* 'vereint sich (zu Hause)' [gr. *νέομαι* 'kehre heim, komme davon' [got. (+) *ga-nisan* 'gerettet werden'
**prók̂- ~ *prek̂-* 'fragen'	?[jav. Konj. *ā-frasāne* V. 3,27 'will mich beraten' toch. Konj. B *preku*, A *pärkmär* 'fragen' ?[lit. *peršù*, (*piršti*) 'für jmdn. freien'
**sókH- ~ *sékH-* 'sch(n)eiden'	heth. 3s *sākki* 'weiß', 2p *saktēni* 'wisst' ?[lat. *secō*, *-āre* '(ab-)schneiden, mähen', [*ne-sciō*, *-scīre* 'nicht wissen'
?**(s)gósh₂- ~ *(s)gesh₂-* 'erlöschen'	[toch. Präs. B 3s *keṣäṃ*, A 2s *käṣt* erlöschen' [lett. *dzešu*, (*dzèst*) 'löschen'
**skrób- ~ *skreb-* 'kratzen, schaben'	?[kymr. *craf-* 'kratzen' (!) [ae. (+) *screpan* 'schaben, kratzen' lett. *skrabu*, (*skrabt*) 'kratzen, schaben' [russ. (+) *skrebú*, (*skrestí*) 'kratzen, schaben'; [poln. *skrobię*, (*skrobać*) 'kratzen, schaben'

*srób^h- ~ *sreb^h- '(mehrfach) schlürfen' heth. *s^{a}rāpi* 'nippt'
[lit. *srebiù*, (*srẽbti*) 'schlürfen'
[aruss. (+) *sereblju*, (*sьrbati**) 'schlürfen'

*u̯óh$_2$g- ~ *u̯eh$_2$g- 'brechen, beißen' heth. *wāki* 'beißt'
[toch. Konj. B *wākaṃ*, A *wākaṣ* 'brechen'

2. Wurzelstruktur CeRC-

*b^{h}órH- ~ *b^{h}r̥H- 'stoßen, schlagen' alit. *barti* 'schimpft' → [lit. *barù* (*bárti*)
[aksl. *borjǫ*, (*brati*) 'kämpfen'
?[lat. *feriō, -īre* 'stoßen, schlagen'(!)
?[alb. *bie* 'klopft, schlägt; fällt' (!)

*b^{h}lónd^h- ~ *b^{h}l̥nd^h- '(sich) trüben' [an. (+) *blanda* '(hinein)mischen'
?[lit. *blendžiù*, (*blę̃sti*) 'mit Mehl anrühren' (!)
?[aksl. *blędǫ*, (*blęsti*) 'irren, schwatzen' (!?)

*ĝ^{h}óng^h- ~ *ĝ^{h}n̥g^h- 'gehen, schreiten' [got. (+) *gaggan*, [afr. (+) *gunga* 'gehen'
?[lit. *žengiù*, (*žeñgti*) 'schreiten' (!)

?*h$_1$ói̯g^h- ~ *h$_1$ig^h- '(fort)gehen' ?[arm. Aor. *ēǰ* 'stieg herab'
[gr. *οἴχομαι* 'gehe (fort), bin fort',
?[*εἴχομαι* Hsch. (!)

*h$_1$órk- ~ *h$_1$r̥k- 'schneiden' heth. *ārki, arkanzi* 'zerschneiden, aufteilen'
[lat. *ercīscō*, *-ere* '(die Erbschaft) teilen' (!)

*ḱónk- ~ *ḱn̥k- 'hängen (tr.)' [heth. *kānki, kankanzi* 'aufhängen'
?[lat. *cūnctor*, *-ārī* 'zögern'
[ahd. (+) *hāhan* 'hängen (tr.)'

?*kóu̯h$_2$- ~ kuh$_2$- 'schlagen, hauen' ?[toch. Konj. B 3s *kowäṃ*, 1p *kawam*, A 3p *kāweñc* 'erschlagen' (!)
[an. (+) *hǫggva* 'hauen, schlagen'
[lit. *káuju*, (*káuti*) 'schlagen'
[aksl. (+) *kovǫ*, (*kovati*) 'schmieden'

*kólh$_2$- ~ *kl̥h$_2$- 'schlagen' [lit. *kalù*, (*kálti*) 'schlagen, schmieden'
[aksl. (+) *koljǫ*, (*klati*) 'schlachten'

*króu̯s- ~ *krus- 'stoßen' [gr. *κρούω* 'stoße, schlage'
?[lit. *krušù*, (*krùšti*) 'zerstampfen, zerstoßen';
?[lit. *kriaušiù*, (*kriaũšti*) 'stechen' (!)

**lói̯d-* ~ **lid-* 'lassen'	[lat. *lūdō, -ere* 'spielen' (?)
	[lett. *laîžu*, (*laîst*) 'lassen';
	?[(w)lit. *léidmi* → *léidžiu* (!)
**lóu̯H-* ~ **luH-* 'abtrennen, lösen'	?[gr. λύω 'löse, befreie'
	?[lat. *luō, -ere* 'büßen, zahlen'
	toch. Konj. B *lāwaṃ*, A *lawaṣ* 'senden'
**móld^h-* ~ **ml̥d^h-* 'feierlich sprechen'	heth. 3s *māldi* 'rezitiert, gelobt'
	?[lit. *meldžiù*, (*melsti*) 'bitten, beten'(!)
**mólh_2-* ~ **ml̥h_2-* 'zermahlen'	[heth. 3s *malli*, 3p *mallanzi* 'mahlen'
	?[arm. *malem* 'zerstoße, zerquetsche'
	?[lat. *molō*, *-ere* 'mahlen';
	[umbr. 3s Ipv. *kumaltu* 'soll zerbrechen'
	[mbret. (+) *malaff* 'mahle';
	?[air. *melid* 'mahlt' (!)
	[got. (+) *malan* 'mahlen'
	[lit. *malù*, (*málti*) 'mahlen'
	?[aksl. (+) *meljǫ*, (*mlěti*) 'mahlen'(!)
**nói̯H-* ~ **niH-* 'führen'	heth. *nēhhi*, *naitti*, *nāi; nēanzi* 'führen' (!)
	?ved. 3d Ipf. *ánītām* RV 1,121,5 'brachten',
	?[Präs. *náyati* 'führt' (!)
	[jav. *naiieiti* 'leitet, führt'
**(s)kórs-* ~ **(s)kr̥s-* 'krempeln'	[lat. *carrō*, *-ere* 'Wolle krempeln'
	[lit. *karšiù*, (*kar̃šti*) 'Wolle krempeln'
**spónd-* ~ **spn̥d-* 'spenden, libieren'	heth. *ispanti* 'libiert, opfert' (~ *sipāndi* 'id.'?)
	?[gr. σπένδω 'libiere, spende' ?
	[osk. *spentud* 'soll spenden' (!)
**spónh_1-* ~ **spn̥h_1-* 'spannen'	?[gr. πένομαι 'strenge mich an' (!)
	[ahd. (+) *spannan* 'spannen', *spanan* 'locken';
	?[got. (+) *spinnan* 'spinnen' (!)
	[lit. *pinù*, (*pìnti*) 'flechten'
	[aksl. (+) *-pьnǫ*, (*pęti*) 'spannen'
**spórH-* ~ **spr̥H-* 'treten, stoßen'	heth. *ispāri, isparranzi* 'niedertreten';
	2p *isperten* (!)
	[ved. *sphuráti* 'stößt weg'
	[jav. *-sparat̰* 'stieß, trat'
	?[lit. *spiriù*, (*spìrti*) 'mit dem Fuß stoßen'

	[aksl. *-pьrǫ*, (*-prěti*) *sę* 'sich stemmen, stützen'; ?[aksl. (+) *-pьrǫ*, (*-pьrati*) '(zer)treten' (!)
**stóu̯d-* ~ **stud-* 'stoßen'	[ved. *tudáti* 'stößt, stachelt an' [got. (+) *stautan* 'stoßen'
?**su̯ór-* ~ **sr̥-* 'tönen'	?[ved. *svárati* 'tönt, rauscht' (!) [got. *swaran*, [an. (+) *sverja* 'schwören'
**u̯ói̯g-* ~ **u̯ig-* 'weichen'	[ved. *vijáte* 'bewegt sich, flieht' [khot. *bijs-* 'gießen, schütten' toch. Konj. B *wikātär*, A *wekaṣ* 'schwinden'
**u̯ólg-* ~ **u̯l̥g-* 'sich rollend bewegen'	?[heth. *walakzi* '(?)' ?[ved. *válgati* 'wallt auf, springt' [ae. (+) *wealcan* 'rollen; (aus)pressen, drücken'
**u̯ólH-* ~ **u̯l̥H-* 'aufwallen'	[got. (+) *wulan* 'sieden'; [ahd. (+) *wallan* 'wallen, wogen' ?[lit. *veliù*, (*vélti*) 'walken, wälzen' (!)
**u̯órs-* ~ *u̯r̥s-* 'abwischen, fegen'	heth. *warsi* 'wischt ab, erntet' [alat. *uorrō, -ere* 'schleifen, fegen' [r.-ksl. *vьrchu* 'dresche'

3. Wurzelstruktur *CeR-*

**pór-* ~ **per-* 'durchkommen'	[gr. *πείρω* 'durchdringe; durchbohre' [got. (+) *faran* 'wandern, ziehen' [ksl. (+) *-prati*, *-porjǫ* 'zerschneiden, auftrennen'
**skór-* ~ **sker-* 'schneiden'	heth. *iskāri* 'sticht, steckt' [arm. *kʻerem* 'kratze ab, schabe ab' [gr. *κείρω* 'schere' [an. (+) *skera* 'scheren, schneiden' [alb. *shqerr* 'zerreißt, zerfetzt, zerkratzt'
?**stón-* ~ **sten-* 'stöhnen'	?[ai. (ep.) *stanant-/ni-ṣṭanant-* 'stöhnend' ?[gr. *στένω* 'stöhne' ?[ae. (+) *stenan*, mnd. *stenen* 'stöhnen' ?[lit. *stenù*, (*stenė́ti*) 'stöhnen'

[aksl. (+) *stenjǫ*, (*stenati*) 'stöhnen';
[aruss. (+) *stonju*, (*stonati*) 'stöhnen'

$\hat{g}^h$óu̯- ~ *$\hat{g}^h$(e)u̯-* 'gießen, schütten' toch.B Konj. *kewu, kutär* 'gießen'
[gr. χόω 'häufe auf', ?[χέω 'gieße'

$h_1$óu̯- ~ *h_1(e)u̯-* 'sehen' heth. *ūḫḫi, autti, uwanzi* 'sehen'
[ved. 1s Med. *uvé* 'sehe (an mir)'

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[Korrekturnote: Eine Spur ursprünglicher Reduplikation beim tochariscen Konjunktiv I/V wird in dessen auffälliger regelhafter Erstsilbenakzentuierung gesehen, der häufig durch die Wirkung einer durch ə-Synkope geschwundenen Reduplikationssilbe erklärt wird. Gerade bei einer *o*-stufigen Bildung würde man jedoch einen Reduplikationsvokal **o* > **ë* wie beim PP erwarten, und das vorliegende Akzentmuster kennt durchaus Ausnahmen: für eine andere Deutung s. Þórhallur EYÞÓRSSON, Proto-Indo-European origins of Tocharian accent: Class V subjunctives in Tocharian B. *TIES* 6, 1993, 43-94.]

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Length and *Métatonie douce* in Baltic Deverbative Nouns[1]

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1.0. In this article, the type of Baltic deverbative nouns characterized by a lengthened root vowel and *métatonie douce* will be addressed, and the well-known theory that the metatony and length have their origins in the PIE root nouns will be reviewed. In addition, an alternative, inner-Baltic explanation for this derivational category will be presented; it will be argued that both the lengthening and *métatonie douce* are explicable by the regular retraction of the ictus and contraction of the sequence *-ìi̯-* in medial stressed position (i.e. an extension of Stang's Rule).

2.0. In order to explain the lengthening and *métatonie douce* of deverbative nouns in Baltic different theories have been put forth. One prominent theory is that these words continue archaic PIE root nouns.[2] One of the main advocates of this theory is RASMUSSEN (mainly 1992: 189) who describes the development from PIE via Balto-Slavic to Baltic in detail. Starting from PIE root nouns of the structure *CoRH-*,[3] the nominative singular would have the structure *CoRə-s* in which Indo-European *o* develops into Proto-Balto-Slavic *a*, resulting in *CaRə-s*. Next, the vocalized laryngeal would be lost with compensatory lengthening: *CāR-s*. In this way the long *ā* of the root has arisen, starting from an original short *o*-vowel. Secondly, all Proto-Balto-Slavic mono-

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[2] E.g. RASMUSSEN (1992), KORTLANDT (1985), DERKSEN (1996). BAMMESBERGER (1973:19ff.) also considers the possibility that the lengthened root vowel in certain of these words may reflect the long-grade of original root nouns, but he also admits that it is problematic that external evidence supporting such a reconstruction is generally lacking.

[3] The laryngeal is reconstructed because the verbal counterparts to these Baltic nouns have the acute tone in all cases mentioned.

syllabic words supposedly acquired the falling tone, which in turn explains the Proto-Baltic circumflex long *ā̃*. The falling tone, originating in the monosyllabic forms of the paradigm, then became distinctive and was even preserved when these nouns were transferred to the *ā*- or *ē*-declension. One of RASMUSSEN's examples is Lithuanian[4] *šovà* 'bolt, hollow' with the verbal counterpart *šáuti* 'to push in, to shove, to shoot' where the development from PIE to Lithuanian would be as follows: Nom. Sg. **ḱóu̯ə-s* > **ćáu̯ə-s* > **ćā́u̯-s* > **ćā̃u̯-s* → Lith. *šovà, šovẽ.* Some further examples are presented,[5] e.g. *kovà, kõvė* 'hit, fight' (*káuti* 'to hit'); *lomà, lõmė* 'niedrige Stelle auf dem Acker' (*ìmti* 'to break'); *tvorà*, Latv. *tvāre* 'fence'[6] (*tvérti*, Latv. *tvef̂t* 'to fence in'); *volẽ*, Latv. *vàle* 'hölzerner Schlegel' (*vélti* 'walken', Latv. *veȋt* 'to roll over'); *žolẽ* 'herb, grass' (*žélti* 'to become green').

2.1. Deverbative nouns with this shape are immensely productive in Baltic and in order to make probable an origin as root noun for any given noun, parallel formations in other Indo-European languages would be a desideratum.[7] The relatively few cases where a reconstruction as a root noun is corroborated by external evidence have recently been collected and investigated,[8] and these studies have shown that such original root nouns follow a pattern quite different from the one

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[4] In the following, Lithuanian word forms will be unmarked.

[5] A list of examples of this kind is presented by RASMUSSEN (1992:189-190). Next to the examples with original *o*-grade, a few examples with *e*-grade are quoted, e.g. *gėlà* 'pain, sorrow', and with zero-grade, e.g. *gyrà* 'praise, boasting'.

[6] The intonation of Latv. *tvāre* is unknown, cf. DERKSEN (1996:132).

[7] The suggested root nouns have the structure *CoRH-*, apparently comparable to the archaic ablaut of the type Nsg. **nokʷt-s*, Gsg. **nekʷt-s* (cf. RASMUSSEN 1992:189 with references to SCHINDLER 1972a). It should be noted here that the Baltic nouns in question are generally of the structure *-C(V)RH-* and, as was pointed out to me by Alan Nussbaum, original root nouns of this structure seem to have extended the zero grade of the root (*-CRH-*) to include the whole paradigm by way of levelling already in the proto-language, as suggested by Av. *xrū-*, MIr. *crú*, Slov. *krî* 'blood'; Lith. *bruvìs*, OCS *brъvь*, OI *bhrū́ḥ*, Gk. ὀφρῦς 'brow, eyebrow'; Lith. *pilìs*, OI *pū́r* 'castle, town'. It can, of course, not be ruled out that these particular Balto-Slavic nouns constitute counterevidence to this widespread assumption, but in order to reconstruct this type of root nouns with certainty, evidence from outside Balto-Slavic would be needed. Note that the possibly archaic ablaut of the root noun **dom-/*dem-* (if derived from the verbal root **demH-*) may be of relevance here (cf. SCHINDLER 1972a:32ff.).

[8] LARSSON (2001, *forthcoming*).

suggested above. These nouns are generally inflected as *i*-stems/consonantal stems,[9] and there are no examples of externally attested root nouns continued exclusively as thematic stems in Baltic.[10] Thus, the suggested transfer of root nouns to the *ā*- and *ē*-stems is unparalleled when the attested continuants of root nouns are considered.[11] It is also notable that all attested cases of original root nouns in Baltic are underived nouns, i.e. nouns without a proven verbal counterpart. Thus, it seems unlikely that the class of root nouns was a productive noun-

[9] The partial transfer from the original consonantal inflection to the *i*-stems was triggered by the formal merger of the endings in the accusative. A unique exception may be the word for 'heart' which was originally a neuter noun and thus did not have the characteristic accusative ending **-m̥*. In this single case we find some thematic forms, cf. *šerdẽ*, Latv. *se͂rde* 'Mark, Kern im Holze' and OCS *srěda* 'middle' next to the *i*-stems Lith. *širdìs*, Latv. *si͂rds* 'heart', OCS *srъdь-ce* n. 'heart', Slov. *sȓd* f., Skr. *sȓd* m., f. 'anger'. This single case of thematicization of an original root noun is most likely due to the fact that the root noun was originally of neuter gender which allowed thematicization of the strong case-forms. The transfer to the *i*-stem/consonantal inflexion may have originated in the oblique cases where the word had consonantal endings, e.g. Gsg. **šīrd-es*. Another possibility is that the original neuter noun was transferred to the *i*-stems simply because many other words for parts of the body belonged to this class, as suggested by SZEMERÉNYI (1970:531).

[10] In the few cases where an original root noun appears to have entered a thematic stem class in Baltic, a closer look reveals that these particular thematic stems are securely established for the proto-language, e.g. *pė́das* 3, *pėdà* 3, Latv. *pę̂ds*, *pę̂da* 'footprint' which have been argued to reflect a reshaped original root noun, cf. SKARDŽIUS (1956:159). However, in the light of Winter's Law these forms should rather be compared to the thematic forms seen in OI *padám*, OIc. *fet*, Arm. *het* 'step, footprint, foot'. Another possibility (also considering OPr. *pedan* 'ploughshare') is to compare these words to Gk. πηδόν 'oar blade', i.e. a *vr̥ddhi* formation **pēd-ón* meaning *'foot-like thing'. An additional example of this kind is *žiemà* 4, Latv. *ziema*, OPr. *semo* Nsg. f. EV 15, OCS *zima* 'winter'. These words are not direct continuations of a root noun, but may reflect either an original *vr̥ddhi* formation, i.e. **ǵʰei̯m-o-* 'wintery' → 'winter', cf. SZEMERÉNYI (1959: 122) or be comparable to Gk. χεῖμα 'winter', OI Lsg. *héman* 'in the wintertime', cf. SCHINDLER (1967:203).

[11] The Slavic examples are less uniform, and apparently some deverbative root nouns are continued in Slavic as *i*-stems (cf. the examples in RASMUSSEN 1992: 188), e.g. **rě̑čь* 'talk, word, thing' in SCr. *rȉječ* (possibly from a PIE root noun: Nsg. **rḗk-s*, Asg. **-m̥*). The falling intonation (APc) may indicate that the word was originally mobile (Meillet's law).

forming category in Proto-Baltic,[12] and in order to isolate a group of original root nouns that would have given rise to this productive pattern, counterparts from other Indo-European languages would be needed, especially since the mere fact that these nouns have lengthened grade and *métatonie douce* is not in itself enough to argue an origin as root nouns.

3.0. Another way of approaching this problem would be to explain the metatony and length within the Baltic system itself. In Baltic, deverbative nouns are frequently formed with the productive[13] suffixes **-i̯ā-* (f.) and **-i̯o-* (m).[14] These suffixes were subsequently contracted to Lithuanian *-ė* and *-is/-ỹs* respectively. As has been shown by STANG (1966:145-147, 171, 1966a), the sequence *-ìi̯-* in medial stressed position lost its ictus to the preceding syllable. This caused the syllable to change an original acute tone into a circumflex, i.e. the retraction caused *métatonie douce* on a preceding syllable. This rule has been accepted as a major source for Baltic metatony.[15] It can also be argued that the lengthening may be derived from the same phonological process; when the ictus was retracted to the preceding vowel and the suffix contracted, this yielded not only *métatonie douce* on the preceding syllable, but an originally short vowel was also lengthened.[16] The com-

[12] Cf. AMBRAZAS (1993) who has established a chronology for the different deverbative noun-forming categories and their productivity at different stages in the history of the Baltic languages.

[13] According to AMBRAZAS (1993:284) this suffix is still used productively in Modern Lithuanian to form deverbative action nouns.

[14] In some words of this kind, the **i̯o-* / **i̯ā*-suffix may be inherited from Proto-Indo-European times (cf. BRUGMANN 1906:188f.). Yet in other cases the **i̯ā*-formations may be back-formations from compounds where the suffix was productive in possessive and determinative compounds, cf. LARSSON (2002), ENDZELIN (1922:88).

[15] Cf. most recently DERKSEN (1996).

[16] This explains the regular lengthening in all suffix-stressed **-ìi̯o-*, **-ìi̯ā-* and **-ìi̯u*-stems, and may also account for the spelling-variants <oa> and <ea> in the Old Prussian *Elbing Vocabulary* (cf. fn. 25 below). Apparently, the regular lengthening is restricted to disyllabic words; in polysyllabic words and compounds we find the same retraction of the ictus and *métatonie douce*, but no lengthening, cf. *drapãnis* 'clothing (adj.)' (*drãpana* 'clothing, dress'), *vakãris* 'western' (*vãkaras* 'evening', *vakaraĩ* 'the West'), *juodaplaũkis* 'blackhaired' (*pláukas* AP3

plete arguments for this extension of Stang's rule have been presented in LARSSON (*forthcoming b*), but even if this explanation for the length is not accepted, most scholars agree that the p a t t e r n with *métatonie douce* and lengthening has become a characteristic of deverbative nouns of this kind.[17] Nouns of this type generally have immobile accent and belong to accent paradigm (AP) 2; however, examples belonging to the mobile AP4 occur as well.[18] These derivatives generally denote action nouns (sometimes with a more concrete meaning). When derived from a verb with an acute root vowel, we regularly find *métatonie douce*, cf.[19] *mõlė* 2/4 'milling, grinding' (*málti* 'to mill, to grind'); *mỹnė* 2 'breaking of hemp and flax', Latv. *mìne* 'place where loam is trampled' (*mìnti*, Latv. *mĩt* 'to break, to trample'); *kũlė* 2 'threshing', *kūlỹs* 4 'wisp of straw' (*kùlti* 'to thresh'); Latv. *šķèle* 'slice of bread' (Latv. *šķel̂t*, Lith. *skélti* 'to split');[20] *gẽris* 2 'drink' (*gérti* 'to drink'); *bẽgė*

'hair'), *juodākė* 'dark-eyed girl' (*akìs* AP4 'eye'); for details about the accentuation of compounds cf. LARSSON (2002).

[17] STANG (1966:149) recognizes this pattern and concludes that both *métatonie douce* and lengthening have become characteristic for this word-forming process. However, he chooses to explain the vowel-length as an analogical extension from roots of the structure *CVRə-C* (1966:146ff.). KURYŁOWICZ (1956:293f., 1968:319) also considers the length in these nouns an analogical extension of the Baltic ablauting system.

STUNDŽIA (1997:261) suggests that the lengthening in the verbal derivatives is analogically projected from the past-tense forms of the verb. Such an analogy can, however, only account for the lengthening in deverbatives but leaves deadjectival derivatives, such as *grõžis*, *grõžė* 'beauty' (*gražùs* 'beautiful'), *svõris* 'weight' (*svarùs* 'heavy') etc., unexplained.

[18] This development where the ictus was retracted from the ending would regularly yield accent paradigm 2; however, the productive spread of mobility in these stems accounts for the large number of nouns belonging to AP4, cf. STANG (1966: 147ff.). Often the original immobile variants have been kept in dialects or as synonyms next to the more common mobile variants, cf. *lomẽ* AP4 : *lõmė* AP2 'ein ausgerengter Platz auf dem Felde, auf der Wiese', *bėgẽ* AP4 : *bẽgė* AP2 'a run', *molẽ* AP4 : *mõlė* AP2 'milling, grinding', *kūlỹs* AP4 'wisp of straw' : *kũlė* AP2 'threshing'.

[19] The examples are quoted mainly from collections like DERKSEN (1996), BAMMESBERGER (1973), SKARDŽIUS (1943), OTRĘBSKI (1965), LESKIEN (1891). I have also added some examples myself, mainly from *LKŽ* and *DLKŽ*. The Latvian material is quoted from ENDZELIN (1922), MÜHLENBACH-ENDZELIN (1923-1932).

[20] In Latvian *ē*-stems *métatonie douce* is not as widespread as it is in the Lithuanian *ē*-stems. The metatony in this morphological class may, nevertheless, have an East Baltic origin (cf. DERKSEN 1996:64), as the following comparisons sug-

2/4, *bė̃gis* 2 'run, course' (*bė́gti* 'to run'); *glėbỹs* 4 'armful' (*glė́bti* 'to embrace'); *dỹgė* 2/4 'gooseberry, stickle-back' (*dýgti* 'to germinate').

Nouns derived from roots containing a short monophthong or diphthong have a lengthened circumflex root vowel,[21] cf. *kẽpis* 2 'bread made with curd' (*kèpti* 'to bake'); *nẽšis* 2, often pl. *nẽšiai* 'two buckets of water carried with a yoke, burden, pack' (*nèšti* 'to carry'); *mẽtis* 2 'throw' (*mèsti* 'to throw'); *vėžẽ* 4,[22] *vẽžis* 2 'rut, track, path' (*vèžti* 'to convey, to drive'); *gymẽ* 4 'nature, sex, (grammatical) form' (*gim̃ti* 'to be born'); *brỹdis* 2, *brỹdė* 2/4 'wading, track, trail (left in a high grass or crop)', Latv. dial. *brìdis* 'a while, a short period of time' (*brìsti*, Latv. *brist* 'to wade'); *kỹšis* 2 'bribe, bolt' (*kìšti* 'to put into'); *skrỹdis* 2 'flight' (*skrìsti* 'to fly'); *lỹkis* 2 'remainder' (*lìkti* 'to remain, to stay, to leave behind'); *knysỹs* 4 'nuzzling, rooting up' (*knìsti* 'to nuzzle, to root up'); *krỹtis* 2 'fall' (*krìsti* 'to fall'); *ryšỹs* 4 'string' (*rìšti* 'to connect'); *brũkis* 2 'prick, stab, thrust' (*brùkti* 'to poke, to thrust, to shove'); *mũšis* 2 'battle' (*mùšti* 'to beat'); *plũkis* 2 'flood, flooding' (*plùkti* 'to be wet, to be covered in water'); *sũkis* 2 'turning, twisting, circle, wheel' (*sùkti* 'to twist, to turn, to spin').[23] The examples above clearly show that both the *métatonie douce* and length is regular in deverbatives[24] with the suffix **-i̯o-/*-i̯ā-*.[25]

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gest: Lith. *volẽ* 4 'hölzerner Schlegel', Latv. *vàle* 'Waschbleuel, Schlegel des Dreschflegels' (Latv. *velt* 'to roll over'); Lith. *mỹnė* 2 'breaking of hemp and flax', Latv. *mìne* 'place where loam is trampled' (Latv. *mīt* 'to break, to trample') and Lith. *žymẽ* 4, Latv. *zìme* 'sign' (Latv. *pazīt* 'to recognize'). In many other cases the Latvian *ē*- and *ā*-stems have adopted the tone of the verb.

[21] Note that the secondarily lengthened original **o*-vowel does not result in Proto-Baltic **ō* (Lith., Latv. *uo*), but in **ā* (Lith. *o*, Latv. *ā*), cf. the secondary Baltic ablaut system as described by WATKINS (1965).

[22] *Lietuvių Kalbos Žodynas* (1999:18) quotes the immobile variant *vẽžė* AP2, but the existence of this variant cannot be verified.

[23] Deverbatives with the **i̯u*-suffix show the same regular lengthening and *métatonie douce*, cf. *lỹkius* 2 'remainder' (*lìkti* 'to leave behind'); *gỹrius* 2 'swank, swanker' (*gìrtis* 'to swank'); *vỹlius* 2 'deceit' (*vìlti* 'to deceive'); for further examples, cf. DERKSEN (1996:36f.).

[24] In denominatives, on the other hand, we find *métatonie douce* (and lengthening of originally short vowels) in derivatives with abstract meaning but not in concrete nouns. STANG (1966:146), following KURYŁOWICZ (1958:287, 295), explains the opposition in pairs like *gỹvis* 2 'liveliness' : *gývis* 1 'living things', i.e. between abstract and concrete adjectival derivatives, as reflecting an older accentual opposition between the suffix-stressed abstract nouns, often with neuter gender (e.g. *gỹvis* 2 < **gīvìi̯an*) and the root-stressed concrete nouns (e.g. *gývis* 1 <

**gývi̯as*). Other examples of this original opposition are *bẽris* 2 'bayness, darkness' next to *béris* 1, Latv. *bẽris* 'bay horse' (*béras*, Latv. *bę̃rs* 'bay, reddish brown'); *juõdis* 2 'blackness' next to *júodis* 1 'a black horse' (*júodas* 'black'); *mar̃gis* 2 'variegation, diversity of colours' next to *márgis* 1 'spotted ox or dog', *márgė* 1 'speckled, spotted aimal' (*márgas* 'motley, variegated, of many colours'); *sū̃ris* 2 'saltiness' next to *sū́ris* 1 'cheese' (*sū́ras* 'salt'). The same opposition is found in nouns derived from adjectives with s h o r t vowel: in the originally suffix-stressed abstracts we find both metatony and the regular lengthening, cf. *gẽris* 2 'the good, goodness' (*gẽras* 'good'); *mõžis* 2 'smallness' (*mãžas* 'small'); *grõžis*, *grõžė* 2 'beauty' (*gražùs* 'beautiful'); *plõtis* 2 'breadth, width' (*platùs* 'broad, wide'); *skõnis* 2 'taste' (*skanùs* 'tasty'); *svõris* 2 'weight' (*svarùs* 'weighty, heavy'); *gỹlis* 2, *gỹlė* 2/4, Latv. *dziĩle* 'depth' (*gilùs* 'deep'); *dỹdis* 2 'greatness, size' (*dìdis* 'big'); *pỹktis* 2 'anger' (*pìktas* 'angry'); *slỹdis* 2 'slipperiness' (*slidùs* 'slippery'); *pỹgis* 2 'cheapness' (*pigùs*, 'cheap'); *žỹlis* 2 'greyness' (*žìlas* 'grey'); *sẽklis* 2 'shallow(s)' (*seklùs* 'shallow'), whereas the originally root-stressed derivatives with a more concrete meaning, on the other hand, have no metatony and no lengthening, cf. *žìlis* 2 'grey-haired man' (*žìlas* 'grey'); *sẽklis* 2 'a shallow place' (*seklùs* 'shallow'); *plìkė* 2 'bald spot', *plìkis/-ė* 2 'baldhead' (*plìkas* 'bald'); *sẽnis* 2 'old man', *sẽnė* 2 'old woman' (*sẽnas* 'old'); *šmùlis* 2 'animal without horns' (*šmùlas* 'without horns'). It seems plausible that these concrete nouns were originally root-stressed (comparable to the type *gývas* that is derived from an adjective with long vowel) and thus Stang's rule of retraction of the ictus from the suffix did not apply here. This explains the lack of both lengthening and metatony in the concrete derivatives. (It should be added that this original distribution is not as obvious in the deverbative nouns; nevertheless, traces of such a distribution may be sought.)

The same distribution is found in the deadjectival **i̯u*-stems: abstracts in *-ius* derived from adjectives show both lengthening and metatony, cf. *gẽrius* 2 'pleasure, gladness' (*gẽras* 'good'); *sẽklius* 2 'Untiefe' (*seklùs* 'shallow'). Examples of the originally root-stressed type with a more concrete meaning generally denote beings or objects which have the characteristic expressed by the adjective, cf. *klìšius* 2 'bandy-legged person' (*klìšas* 'bandy-legged'); *bãsius/-ė* 2 'bare-foot, a bare-foot person' (*bãsas* 'bare-foot'); *šãšius/-ė* 2 'a scabby person' (*šãšas* 'scab, scabby').

[25] STANG (1966:171) argues that his rule of retraction must have applied at an early stage, since it occurs in both Lithuanian and Latvian. Also the common contraction of the sequence *-ìi̯-* indicates a Common Baltic origin. In fact, a few examples of derivative **i̯o-* and **i̯ā*-stems are found in Old Prussian as well. What is more, the examples from the *Elbing Vocabulary* show a distinct orthographic peculiarity: the spelling variants <ea> and <oa> occur almost exclusively in front of the **i̯o-/*i̯ā*-suffix, e.g. the orthographic variant <oa> occurs 22x before the endings *-e* (< **-i̯ā*) and *-is* (< **-i̯os* according to MAŽIULIS' reconstructions (1988-1997); note that the ending *-is* in the EV derives from PBalt. **-as* or **-is* in other cases), but only 3x in front of other endings. The spelling <o>, on the other hand, predominantly represents the original long vowel **ō/*ā* (i.e. not the secondary lengthened circumflex vowel in front of **-ìi̯o-/*-ìi̯ā*), cf. OPr. *mothe* EV 'mother', OPr. *brote* EV 'brother', OPr. *podalis* EV 'geringer Topf' (Lith. *puodẽlis*, Latv. *puôds*).

3.1. The same phonetically conditioned development cannot be argued for the *ā*-stems, since the lengthening and *métatonie douce* in these stems cannot be attributed to the development of the **i̯i̯o- / *i̯i̯ā*-suffix. STANG (1966:150) has presented the argument that the word-forming pattern with lengthening and *métatonie douce* was transferred analogically from the *i̯i̯ā*-stems to the similar *ā*-stem deverbatives. A contributing factor was most certainly the well-attested interchange between the **i̯i̯ā-*, **i̯i̯o-* and **ā*-stems, where the same derivative often occurs with different endings, mostly with no or only a slight semantic change, cf. *bẽgė, bėgẽ, bẽgis* : *bėgà* 'run'; *šovẽ* : *šovà* 'bolt, hollow'; Latv. *tvāre* : *tvorà* 'fence'; *piovẽ* : *piovà* 'cutting'; *kõvė* : *kovà* 'hit, fight'; *lõmė* : *lomà* 'niedrige Stelle auf dem Acker'; *pynẽ* 'braid' : *pynà* 'plaiting, wickerwork'; *plyšẽ, plyšỹs* : *plyšà* 'cleft, crack'; *stūmẽ* : *stūmà* 'Schiebgerät; träge Person, die man immer stoßen muß'; *mũšis* : *mūšà* 'beating'.

DERKSEN (1996:143) has shown that this analogical transfer is a comparatively recent Lithuanian development. While we hardly ever find traces of the acute tone in Lithuanian deverbatives in *-ė* (where *métatonie douce* is regular), the *ā*-stem deverbatives often have variant forms with acute tone in the dialects or archaic language. In Latvian, the *ā*-stems with analogical falling tone are limited to a few examples, cf. DERKSEN (1996:142). It can also be added here that while the lengthening in deverbative **i̯i̯ā*-stems is almost obligatory, the original

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In recent works on Old Prussian, the digraph <oa> has been assumed to be merely an orthographic variant next to <o>, without any established distribution of the two variants (cf. ENDZELIN 1944:66). However, the complete material has recently been collected and analysed (LARSSON *forthcoming a*), and the theory that the digraphs <oa> and <ea> may represent the secondarily lengthened vowel (or simply circumflex accent?, cf. BERNEKER 1896:255,251) has been put forth, cf. cognates like *soalis* Nsg. m. EV 293 [krewtecht] 'grass' comparable to Lith. *žolẽ* 'grass' (Lith. *žélti* 'to become green'); *toaris* Nsg. m. E 232 [banse] 'mow, hayloft' (corrected form of *coaris*, cf. TRAUTMANN 1910:361) comparable to the Latvian **i̯i̯ā*-stem *tvāre* and Lithuanian *tvorà* 'fence' (Lith. *tvérti* 'to fence in'); *loase* Nsg. f. EV 493 [decke] 'coverlet, blanket' comparable to Lith. *lõžė* 2/4 'place where corn or grain lies, lying grain, bent sheaf' (According to MAŽIULIS (1996:76) both nouns are derivatives from the Baltic verb attested in Lith. *išlèžti* 'to lodge' and Old Prussian *lasinna* IIICat. 3sg. pret. [leget] 'placed, lay'); *boadis* Nsg. m. EV 164 [stych] 'a thrust' (OPr. *embaddusisi* IIICat. 'stuck in, embedded in', Lith. *badýti* 'butt, prick, poke, stick (into)', Lith. *bèsti* 'stick (into), sting, dig').

short vowel is more often preserved in *ā*-stems,[26] e.g. *našà* 4 'yield, produce, harvest' (*nèšti* 'to carry'); *dagà* 4 '(summer)heat' (*dègti* 'to burn'); *skalà* 4, Latv. *skala* 'splinter, chip' (*skélti* 'to cleave, to split'); *skarà* 4, Latv. *skara* 'wrap, shawl, cloth, wool' (*skìrti* 'to separate, to part, to detach').[27] Furthermore, the original short vowel sometimes occurs next to the more productive lengthened grade, cf. *kawa* 'der Kampf; auch die Schlacht' (recorded in KURSCHAT 1883:175) next to the productively formed *kovà* 4 and *kõvė* 2; *bridà* 4 'wading; trail (left in the grass, etc.)' next to *brydà* 4 and *brỹdė* 2/4, *brỹdis* 2 'id.'.

It seems likely that the derivational pattern with lengthening of the root and *métatonie douce*, originally a phonological process restricted to the **i̯ā*- and **i̯o*-stems, was analogically extended to include some *ā*-stems as well.

4.0. To conclude, the often quoted assumption that the *métatonie douce* and length in the Baltic deverbative nouns is the result of their prehistory as Proto-Indo-European root nouns may be questioned; especially when previous studies in the continuants of PIE root nouns in the Baltic languages are taken into account.[28]

Instead, these words should be understood within the Baltic derivational system. As has been established here, the projection of the

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[26] This type of deverbative formation is comparable to the Greek type seen in τομή, reflecting PIE **tomh₁áh₂*. Due to the productivity of this type in Baltic, root vocalisms of all types occur, but the *o*-grade originally was and still is the most frequent vowel grade in these words, cf. LESKIEN (1891:159-233), ENDZELIN (1922:193, 199f.). Note that the originally end-stressed deverbative *ā*-stems are generally mobile in Baltic as expected, cf. STANG (1966:148).

[27] The last two examples have cognates in Slavic and Germanic, cf. ChSl. *skala* 'rock, splinter', OE *scalu* 'shell, husk, dish, scale' and ORuss. *skora* 'skin, fur', OE *scearu* 'share, part, piece of land', cf. AMBRAZAS (1994:281).

[28] The fact that only original root nouns with no clear connection to primary verbs have survived as a semi-separate category in Baltic, whereas we find no original deverbative root nouns belonging to the same category, may have a straightforward solution: due to the productive pattern for Baltic deverbal nouns described in this article, it seems likely that when the verbal counterpart to the PIE root noun was retained in Baltic, the more productive deverbal noun-forming categories, such as the inherited **tomh₁ah₂*-type, often existed alongside the less common root noun. In these cases the original root noun, with its complicated inflexion, was ousted by the inherited thematic derivations from the same root with similar meaning and ablaut. This would then explain why there are no clear examples of deverbative root nouns to be found in Baltic, (cf. LARSSON 2003 for details).

ictus from the accentuated suffix **-ìi̯o-/*-ìi̯ā-* and subsequent contraction caused métatonie douce, and the length may be explained by the same phonological process. This regular process, originating in the **ìi̯ā*-stems, has spread to the **ā*-stems where it has become the regular word-forming pattern in this type of verbal abstracts. The productivity is important to the argument; there is almost always a verbal counterpart to the Baltic nouns with lengthened root vowel, and the clear semantic connection between verb and deverbal noun allows a late derivation to be postulated; e.g. *kõvė, kovà* 'hit, fight' (*káuti* 'to hit, to kill, to fight'), *piovẽ, piovà* 'cutting' (*piáuti* 'to cut'), *pynẽ* 'braid' (*pìnti* 'to plait'). In this way many of the examples previously regarded as root nouns may be explained within the Baltic productive system.[29]

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[29] A much-quoted example where an original deverbative root noun may arguably be continued in Baltic as a thematic noun is Lith. *gyrà* 'praise, boasting' next to OI *gīḥ́* 'song of praise' (cf. BAMMESBERGER (1973:20), RASMUSSEN (1992:188ff.); according to SCHINDLER (1972:73), OI *gīḥ́* may be an inner-Aryan innovation). It is noteworthy that the development of a reconstructed root noun Nsg. **gʷr̥H-s* would differ from the attested root noun Nsg. **pl̥H-s*, Asg. **pl̥H-m̥* > Lith. *pilìs, pìlį* 'castle'. Since Lith. *gyrà* is regular within the productive system as a deverbative noun formed from the verb *gìrti* 'to praise, to boast', it is difficult to decide whether the noun has been formed within the Baltic productive system or rather reflects an original root noun that has been adapted to the Baltic derivative system, cf. LARSSON (2003) for details.

Similarly, *gėlà* 'pain' may be either an inner-Baltic derivative from *gélti* 'to ache, to sting' or the continuant of an adapted original root noun as the etymological relationship to OHG *quāla* and OCS *žalь*, Sln. *žála*, Slk. *žiala* may suggest.

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Wortartwechsel in Konstruktionen mit einem Numerale

ROSEMARIE LÜHR

In der allgemeinen Sprachwissenschaft findet man eine Einteilung der Sprachen danach, ob sie A) wie das Deutsche eine Unterscheidung nach count nouns und mass nouns, also nach Individuativa und Massennomina, kennen oder ob B) alle Nomina als Massennomina behandelt werden. Das semantische Merkmal, das hier eine Rolle spielt, ist das der Zählbarkeit. So hat in Sprachen vom Typ A der überwiegende Teil der Nomina das Merkmal [+zählbar] und wird obligatorisch für Numerus markiert. D.h., Nomina, die zählbare Entitäten bezeichnen, haben eine Pluralendung. Dagegen können in Sprachen vom Typ B — ein Vertreter ist das Japanische — Nomina sowohl singularisch als auch pluralisch interpretiert werden. Vor allem in Konstruktionen mit einem Numerale wird dieser Unterschied zwischen A- und B-Sprachen deutlich. Im Deutschen sind die meisten Substantive Individuativa und daher unmittelbar mit einem Numerale verbindbar; vgl.

(1a) fünf Äpfel

Viel seltener sind Massennomina wie *Obst*. Doch kann auch mit solchen Wörtern eine zählbare Entität bezeichnet werden, allerdings nur, wenn auf das Numerale das Wort *Stück* folgt; vgl. ungrammatisches

(1b) *zwei Obst

gegenüber grammatischem

(1c) zwei Stück Obst

Während aber im Deutschen beide Konstruktionen mit einem Numerale vorkommen, also *fünf Äpfel* und *zwei Stück Obst*, gibt es in den B-Sprachen nur den Typ *zwei Stück Apfel*, wobei ein dem Wort *Stück* entsprechendes Morphem ein grammatikalisierter Klassifikator ist.[1] B-Sprachen nennt man daher Klassifikatorsprachen. Was nun die indogermanischen Sprachen und insbesondere die älteren Vertreter dieser Sprachfamilie angeht, so läßt sich unschwer erkennen, daß es sich hier um Sprachen vom Typ A handelt, also um Sprachen, in denen

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[1] Vgl. dazu LÖBEL 1990: 135ff.

die Individuativa die umfangreichste Gruppe der Substantive darstellen.[2] In der Tat sind diese Substantive ohne weiteres mit allen Numeralia kombinierbar. Anders verhält es sich bei den Massennomina. Wählt man das Altindische als Repräsentant einer älteren indogermanischen Sprache, so hat Hisashi MIYAKAWA, unser Mitarbeiter am DFG-Projekt "Das Lexikonkonzept der indogermanischen Sprachen", gezeigt, daß in Verbindung mit solchen Wörtern praktisch keine Numeralia von '1' bis '99' vorkommen.[3] Doch ist möglich, daß in Numeralkonstruktionen das Numerale selbst als eine Art Massennomen fungiert. In den altindogermanischen Sprachen kann dies bei den ererbten Wörtern für 'hundert' und 'tausend' der Fall sein, wenn sie wie ein neutrales Substantiv auftreten. Weil dies so ist und weil Massennomina in der Indogermania eine Sonderstellung einnehmen, wird die folgende Untersuchung auf Numeralkonstruktionen mit den Wörtern '100' und '1000' beschränkt und gefragt, welche syntaktischen Ausdrucksmöglichkeiten es in Verbindung mit diesen Numeralia gibt. Dabei stößt man unweigerlich auf das Phänomen des Wortartwechsels, wobei unter diesem Begriff nicht nur der merkmalhafte, d.h. morphologisch gekennzeichnete Übergang von einer Wortart in die andere gefaßt wird. Auch die bloße syntaktische Umkategorisierung, also ein Wortartwechsel, der ohne besondere morphologische Mittel vor sich geht, ist dazuzurechnen. Welche Varianten des Wortartwechsels auch immer in Numeralkonstruktionen mit den Wörtern '100' und '1000' vorkommen — es ist nach einer Ratio dafür zu suchen.

I. Wortartwechsel in Numeralkonstruktionen mit den Numeralia '100' und '1000' im Altindischen, Griechischen und Lateinischen

1. Die Verbindung mit Individuativ

Nimmt man sich diejenigen altindogermanischen Sprachen vor, in denen die ererbten Wörter '100' und '1000' nebeneinander fortgesetzt

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[2] LEISI 1975: 28.

[3] Komplexivkomposita des Typs ai. *triyugá-* 'Zeitraum von drei Lebensaltern', *tridivá-* 'Dreihimmel' usw. (SOMMER 1948: 44ff.; KORN 1998: 186f.) sind dem Typ *zwei Stück Obst* mit einem numeralklassifikatorähnlichen Element nicht vergleichbar, da hier zählbare Entitäten zu einer Einheit zusammengefaßt sind.

sind, das Indoiranische, Griechische und Lateinische, so werden diese Wörter, wenn als Vertreter des Indoiranischen wiederum das Altindische ausgewählt wird, in dieser Sprache als Substantive behandelt. Der Ausdruck des Gezählten steht demzufolge im Genitiv; vgl. in Verbindung mit Individuativa, den Wörtern mit dem Merkmal [+zählbar] also:
(2) (Akk.) RV 8,5,37d śatám úṣṭrānāṃ 'hundert der Kamele'
(3) (Lok.) RV 8,65,11a sahásre pṛ̥ṣatīnām 'zum Tausend der Scheckigen'
Im Lateinischen kommt nur das Wort '1000' substantivisch vor:
(4) (Nom. oder Akk.) Plautus Men. 177 mille passum
Bezieht sich das Wort auf mehr als ein Tausend, erscheint die Form als Plural:
(5) Ennius Ann. 332 milia militum octo

Dagegen erscheint das Wort '100' im Lateinischen unflektiert in der syntaktischen Position eines Adjektivs. Das Individuativ steht im Plural:
(6) Plautus, Rud. 1314 ... infuerunt,
praeterea centum minaria Philippa in pasceolo sorsus.
'in einem Beutel befanden sich außerdem davon getrennt hundert Minen Gold'
Dieser Gebrauch gilt bei dem Wort '100' auch im Griechischen, und zwar ausschließlich:
(7) B 448 *τῆς ἑκατὸν θύσανοι παγχρύσεοι ἠερέθονται*
'hundert Quasten hängen daran aus lauterem Golde'[4]
Und auch im Altindischen kommt unflektiertes *śatám* in der Funktion eines Adjektivs in Verbindung mit einem pluralischen Individuativ vor:
(8) (Akk.) RV 2,27,10 śatáṃ ... śarádo 'hundert Herbste'
In den Belegen (6) bis (8) steht der Ausdruck für das Gezählte dabei in dem Kasus, den das indeklinable Numerale, wäre es flektiert, tragen würde. Daher hat eine syntaktische Umkategorisierung stattgefunden. Der Übergang in die Funktion eines Adjektivs ist beim Numerale ohne morphologische Markierung erfolgt.

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[4] Im folgenden Beleg ist der Genitiv durch das Verb bedingt:
B 576 *τῶν ἑκατὸν νηῶν ἦρχε κρείων Ἀγαμέμνων*
577 *Ἀτρείδης·*
'diese führte in hundert Schiffen an Agamemnon, der Atride'.

Auch beim Wort '1000' hat man diese Gebrauchsweise im Altindischen und Lateinischen:
(9) (Nom.) RV 4,31,10b sahásram ūtáyaḥ 'tausend Hilfeleistungen'
(10) (Nom.) Horaz bis mille equi

Treten die Wörter für '100' und '1000' in Verbindung mit einem Individuativ jedoch in den Plural und stimmen mit dem Kasus des Ausdrucks des Gezählten überein, ist der Übergang vom Substantiv zum Adjektiv einen Schritt weiter. Vgl. dazu vereinzelt aus dem Altindischen:
(11) (Akk.) RV 6,31,4a śatā́ny ... púro '100 Burgen'
(12) (Lok.) RV 1,29,1e góṣv áśveṣu ... sahásreṣu 'bei 1000 Rindern und Pferden'

Vollständig wäre der Übergang zum Adjektiv, wenn ai. *śatám* und *sahásram* dazu noch im Genus mit dem Individuativ kongruieren würden, doch ist eine solche Verwendung im Altindischen nicht belegt.

Im Griechischen hat man dagegen bei dem Wort '1000' diesen Gebrauch. Jedoch weist *χίλιοι* das adjektivbildende Suffix *-ιο-* auf. Es hat so ein morphologisch markierter Wortartwechsel stattgefunden:
(13) (Akk.) H 471 *δῶκεν ... μέθυ χίλια μέτρα*
'er sandte ... tausend Maße süßen Wein'
Zu der Wortbildung von *χίλιοι* hat man die Bildeweise von ai. *sahasríya-* zum Vergleich herangezogen. Doch heißt das Wort an seinen zwei Belegstellen 'tausendfach, tausendfältig':

(14) RV 1,168,2 vavrā́so ná yé svajā́ḥ svátavasa íṣam svàr abhijā́yanta dhū́tayaḥ /
sahasríyāso apā́ṃ nórmáya āsā́ gā́vo vándyāso nókṣáṇaḥ
'Von selbst entstanden wie die Erdschlünde, selbststark wurden die Schüttler zu Labsal und Sonnenlicht geboren, wie die tausendfachen Wogen der Gewässer, mit dem Munde zu loben wie die Rinder, die Stiere.' (GELDNER)
(15) RV 7,56,14 prá budhnyā̀ va īrate máhāṃsi prá nā́māni prayajyavas tiradhvam /
sahasríyaṃ dámyam bhāgám etáṃ gṛhamedhī́yam maruto juṣadhvam
'Eure in der Tiefe verborgenen Standeszeichen kommen zum Vorschein; ihr Opfersamen, erweitert eure Namen! Lasset euch diesen tausendfältigen häuslichen Anteil an dem Hausopfer gefallen, ihr Marut!'

Zudem sind gr. *χίλιοι* und ai. *sahasríya-* nicht identisch: Während das altindische Wort von einem Kompositum abgeleitet ist, beruht das griechische auf dem Simplex.[5] Es sind also zwei voneinander unabhängige Bildungen.

Doch welche genaue Funktion hat das Suffix *-ιο-* in dem griechischen Zahlwort? Läßt man die von RIX vorgeschlagene Analyse, weil sie zu spekulativ ist, außer Betracht — RIX[6] hat vermutet, daß die Vorform **ĝʰesl-i̯i̯o-* die Bedeutung 'zu einer Hand gehörig(e Menge von Körnern)' trug und neben **sm̥-ĝʰeslo-m* (ai. *sahásram* usw.) 'eine Hand habend' im Sinne von 'in eine Hand gehende Menge (von Körnern) habend' und **smih₂ + ĝʰeslih₂* (lat. *mīlle*) 'ein zu einer Hand gehöriges (= mit einer Hand faßbares) (Maß von Körnern)' vorkam — nimmt man statt dessen an, daß **ĝʰéslo-*, als die Ableitung im Griechischen erfolgt ist, schon 'tausend' bedeutet hat. Die indoiranische Vorform **sm̥-ĝʰésl-om* könnte dann, wie schon SOMMER[7] behauptet hat, 'ein Tausend' bezeichnet haben und so die Substantivierung eines **sm̥-ĝʰésl-o-* 'ein Tausend umfassend' darstellen, das in der Bildeweise mit dem im Altindischen einmal belegten Wort *saṃvátsam* 'ein Jahr lang' zu vergleichen ist.[8] Eine *i̯i̯o*-Ableitung **ĝʰesl-i̯i̯o-* 'zu einem Tausend gehörig' wäre aber für ein mit einem pluralischen Individuativ verbundenes Adjektiv *χίλιοι* keine sehr sinnvolle Bezeichnung: *'zu einem Tausend gehörige Pferde' klänge merkwürdig anstelle von '1000 Pferde'.

2. Verbindung mit einem Massennomen

Um der Wortbildung von gr. *χίλιοι* näherzukommen, sind zunächst die Verbindungen der Wörter '100' und '1000' mit einem Massennomen zu betrachten. Hier wird man nicht recht fündig. Aus MIYAKAWAS Material sind nur ganz spärliche Belege anzuführen, und zwar solche, in

[5] Zur Stütze der These, daß wirklich eine Ableitung vom Simplex vorliegt vgl. die homerischen Komposita *δεκάχιλοι*, *ἐννεάχιλοι* und das inschriftliche attische *δυσχιλοι* (freundlicher Hinweis von M. MEIER-BRÜGGER).

[6] 1991: 231.

[7] 1899: 216ff.

[8] Zu solchen Bildungen vgl. KORN 1998: 186ff.

denen sowohl das Numerale als auch der Ausdruck des Gezählten im Singular steht. MIYAKAWA vermutet für die Bezeichnung des Gezählten so zu Recht kollektive Bedeutung; vgl.:
(16) RV 1,135,1b sahásreṇa niyútā mit *niyútā* als Instrumental Singular zu *niyút-* f. 'Gespann, Vielgespann' insbesondere von den Gespannen, die die reichbeladenen Wagen der Götter ziehen.[9]

GELDNER[10] gibt die Fügung 'mit einem Tausendgespann' wieder.[11] Gemeint ist aber 'mit einem aus tausend Wagen bestehenden Vielgespann'. Auch wenn dieser Beleg vereinzelt ist, ist er instruktiv: Er zeigt, daß das Wort '1000' in Verbindung mit einem Massennomen als 'aus 1000 bestehend' interpretiert werden kann. Entscheidend ist dabei, daß das Massennomen kein bloßes Genuskollektiv wie *Vieh* oder *Obst* ist, sondern ein sogenanntes Gruppenkollektiv. Dieses bezeichnet eine aus mehreren Individuen bestehende Einheit. Ein deutsches Beispiel ist *Herde*.[12] Da also in Verbindung mit einem Massennomen eine Bedeutung 'aus 1000 bestehend' eines Wortes '1000' sinnvoll ist und eine solche Bedeutung die Motivation für den Gebrauch des Suffix **-i̯o-* bei der Vorform von gr. *χίλιοι* darstellen könnte, sind für diese Wortbildung zweierlei Anknüpfungspunkte zu suchen: die Kombinierbarkeit des griechischen Wortes 'tausend' mit einem Gruppenkollektiv und die Bedeutung 'bestehend aus' des Suffixes **-i̯o-* in Numeralkonstruktionen.

3. Die Wörter '100' und '1000' als Gruppenkollektiva

Nach der Bedeutung 'bestehend aus' des Suffixes **-i̯o-* in Numeralkonstruktionen braucht man nicht lange zu suchen. Im Altindischen findet man *gávya-*, *áśvya-* 'aus Rindern, Pferden bestehend' in Bezug auf die Numeralia '100' und '1000'[13]; vgl.:

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[9] GRAßMANN 1996: Sp. 732.

[10] GELDNER 1951: 189.

[11] Vgl. noch RV 10,55,3c cátustriṃśatā … jyótiṣā 'mit vierunddreißig Lichtern'.

[12] LEISI 1975: 33.

[13] Vgl. auch *gó- áśvya-* in:
RV 1,29,1de góṣᵘv áśveṣu śubhríṣu / sahásreṣu …

(17) RV 8,21,10 ā́ tú naḥ sá vayati gávyam áśvyaṃ stotŕ̥bhyo maghávā śatám
'Der Freigebige möge uns Sängern doch ein Hundert von Rindern und Rossen zutreiben.' (GELDNER)
(18) RV 1,126,3 ṣaṣṭíḥ sahásram ánu gávyam ā́gāt
'Eine Kuhherde von tausend und sechzig folgte hinterdrein.' (GELDNER)[14]

Doch anders als in dem eben angeführten Beleg (16) *sahásreṇa niyútā*, wo das Appellativ als Kollektiv fungiert, ist in (17) und (18) das Numerale das Gruppenkollektiv: 'ein aus Rindern und Rossen bestehendes Hundert', 'ein aus Kühen bestehendes Tausend und sechzig'. Hier hat sich also der Wortartwechsel im appellativischen Bereich, und zwar mit einem expliziten Ableitungssuffix, vollzogen.

4. Das adjektivische Wort '1000' in Verbindung mit einem Gruppenkollektiv

Nachdem also das Suffix **-i̯o-* in Numeralkonstruktionen die Bedeutung 'bestehend aus' haben kann, darf man wohl auch für die Vorform von gr. *χίλιοι* diese Funktion annehmen. Zu suchen ist aber dann ein passendes Gruppenkollektiv: Ein solches gibt es: Das Wort *ἵππος* f. bedeutet 'Reiterei' und kommt bei Herodot in Verbindung mit dem Wort '1000' im Singular vor:
(19) Herodot 1,80 *χιλίη ἵππος* 'tausend Mann Reiterei', eigtl. 'die aus tausend (Mann) bestehende Reiterei'.

Man darf so wohl vermuten, daß die Bildung des griechischen Wortes '1000' als *ιο*-Adjektiv von der Verbindung mit einem Gruppenkollektiv ausgegangen ist. Was die Verbreitung des *ιο*-Adjektivs auch auf andere Numeralkonstruktionen angeht, so ist anzunehmen, daß *χιλίη ἵππος* auch im Sinne von '1000 Reiter' verstanden wurde und das Numerale als kongruierendes Adjektiv dann auch mit pluralischen Individuativa auftrat. Man vgl. den Kommentar

[14] Vgl. mit dem Numerale im Plural:
RV 8,34,14b gávyān^{i}y áśv^{i}yā sahásrā
RV 8,73,14b gávyebhir áśv^{i}yaiḥ sahásrair
RV 8,73,15b gávyebhir áśv^{i}yaiḥ sahásrebhir.

im *Thesaurus linguae graecae*[15]:
Est porro et singularis numeri aliquis usus. Nam χιλίη ἵππος … legimus pro χίλιοι ἱππεῖς Mille equites.

II. Der Motor des Wortartwechsels

Damit sind alle syntaktischen Möglichkeiten der Verbindung der Wörter '100' und '1000' durchgespielt. Nun ist nach dem Motor des beobachteten Wortartwechsels zu fragen. Warum wird die Wortart Substantiv dieser Numeralia zumeist aufgegeben, eine Erscheinung, die auch in indogermanischen Sprachen, die z.B. andere Wörter '1000' haben, beobachtbar ist; vgl.
(20) ahd. Otfrid 3,6,4 finf thúsonton mánnes 'fünf Tausend Menschen', eigtl. 'fünf Tausende an Mensch', gegenüber mhd. fünf tūsent ritter

Der Wortartwechsel zum Adjektiv bei den Numeralia '100' und '1000' kann man so fast als diachrones Universale bezeichnen. Ins Spiel kommt hier sicher das in der modernen Semantikforschung postulierte Nebeneinander von starken und schwachen Quantoren, das kurz zu erläutern ist: Während starke Quantoren (*all, most, less than two, the, two of the* …)[16] sich auf eine Untermenge einer vorher (durch den Kontext) errichteten Menge beziehen — wie *Alle Menschen (im Dorf)* —, haben die schwachen Quantoren (*a, some, many, three*) wiederum eine starke und eine schwache Lesart. In der schwachen Lesart quantifizieren, d.h. beschränken sie die Bezeichnung einer amorphen Masse oder eines Pluralausdrucks, der eine unbegrenzte Summe bezeichnet: *viel Wein/viele Äpfel/drei Äpfel.* Dagegen wird in der starken Lesart, die auch partitive oder proportionale Lesart genannt wird, ein Bezug auf eine Untermenge einer anderen festgelegten Menge vorgenommen: *etwas (von dem Tee, den ich im Schrank habe), drei (der) Äpfel (die auf dem Tisch liegen).*

Wendet man sich wieder den ursprünglichen Substantiven '100' und '1000' im Indogermanischen zu, so hat ererbtes substantivisches '100' oder '1000' + Substantiv im Genitiv einen partitiven und damit aussondernden Charakter. Die Numeralia fungieren als schwache Quanto-

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[15] *Thesaurus graecae linguae*, Bd. 9: 1497.

[16] Quantoren werden seit MILSARK (1974) in zwei disjunkte Klassen unterteilt.

ren in ihrer starken Lesart. Doch sind bei Numeralkonstruktionen in der sprachlichen Kommunikation oft auch nichtpartitive Lesarten notwendig — vgl. die starke oder partitive Lesart in:
(21a) ein Tausend der Reiter
gegenüber der schwachen Lesart in:
(21b) 1000 Reiter.

Daher war die Aufgabe des Genitivs und damit die Angleichung der Ausdrücke des Gezählten an den syntaktischen Kasus des Numerale der erste Schritt in der Entwicklung zum Adjektiv. Geht man nun aber davon aus, daß wie auch sonst bei Sprachwandel, wenn zwei Varianten einer sprachlichen Erscheinung nebeneinander bestehen, eine mit der Zeit aufgegeben werden kann, wurde wohl aus folgendem Grund zumeist der substantivische Gebrauch des Numerale eliminiert: Bei höheren Zahlen ist eine aussondernde Funktion des Quantors konzeptionell weniger erforderlich, weil Zahlen wie '100' und '1000' schon sehr große Zahlen sind und noch größere Zahlen voraussetzen. Gegenüber 'ein Hundert der Reiter' oder 'ein Tausend der Reiter' genügt bloßes '100 Reiter' oder '1000 Reiter' in der Sprechsituation zumeist. Verstärkt durch den adjektivischen Gebrauch der niedrigen Zahlen konnte daher auch der Gebrauch der höheren Zahlen als Adjektiv fest werden, wie es im Griechischen der Fall ist. Sind ausgesprochen adjektivische Formen vorhanden, d.h. solche mit adjektivischen Wortbildungsmitteln, wurden diese bevorzugt. Auch das zeigt das Griechische mit seinem *χίλιοι*.

Zusammenfassung

Ausgehend von dem Faktum, daß insbesondere die altindogermanischen Sprachen individuativzentrierte Sprachen sind und so die meisten Substantive unmittelbar mit Numeralia verbunden werden können, wurde die Syntax von Numeralkonstruktionen mit den höheren Zahlen '100' und '1000' untersucht, zunächst die Verbindung mit Individuativa, dann die Verbindung mit Massennomina. Dabei war ein Wortartwechsel vom Substantiv zum Adjektiv in Form von syntaktischen Umkategorisierungen ohne explizite morphologische Kennzeichnung und Wechsel mit Ableitungssuffix feststellbar. Für die Erklärung des Suffixes *-ιο-* in gr. *χίλιοι* war dabei die Verwendung des Suffixes *-iya-* in Numeralkonstruktionen des Typs ai. *sahásram gávyam* maßgeblich. In beiden Fällen ist das Bezugswort ein Gruppenkollektiv, im Altindischen das Numerale '100' und '1000', im Griechischen aber

wohl ein Appellativ des Typs ἵππος 'Reiterei'. Doch kommt das Numerale in Verbindung mit einem appellativischen Gruppenkollektiv auch ohne besondere Suffixe vor; vgl. *sahásreṇa niyútā* 'mit einem Tausendgespann'. Der Motor hinter all diesem Wortartwechsel zum Adjektiv hin wurde in der Funktion der Wörter '100' und '1000' hauptsächlich als schwache Quantoren in ihrer schwachen Lesart gesehen. Ein aussonderndes 'ein Tausend der Reiter' mit dem Quantor in seiner starken oder partitiven Lesart ist kommunikativ-pragmatisch weniger relevant als '1000 Reiter'. In Numeralkonstruktionen mit den Numeralia '100' und '1000' dürften so in der Regel adjektivische Verwendungen bevorzugt und wie im Griechischen im Falle von χίλιοι Formen mit expliziter Adjektivmarkierung favorisiert werden. Grundsätzlich haben aber unsere Untersuchungen wohl deutlich gemacht, daß in Sprachen mit überwiegenden Individuativa auch Massennomina interessante Beobachtungen liefern, und das, obwohl sie anders als in Klassifikatorsprachen hier nicht den zentralen Bereich des Wortschatzes ausmachen. Da wohl keine Sprache auf Massennomina verzichten kann, schaffen sich individuativzentrierte Sprachen solche Nomina immer wieder neu und verwenden hierfür nicht nur Appellativa, sondern funktionieren gegebenenfalls auch Numeralia zu Massennomina um. Das haben die Verwendungsweisen der Wörter '100' und '1000' nicht nur als einfache Substantive und Adjektive, sondern auch als Gruppenkollektive gezeigt.

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Zur uridg. Sekundärwurzel *su̯ed^h(h_1)-/*su̯ēd^h(h_1)-

MICHAEL MEIER-BRÜGGER

A. Das Zeugnis des Griechischen

1. Das Griechische kennt ein Verbum mit Perf. *εἴωθα/ἔωθα* (seit Homer) 'gewohnt sein zu, pflegen zu (mit Inf.)' (Lit.: HAGEN 1993). Das Verbum läßt sich auf eine Grundform ***su̯e-su̯ōd^h-*** zurückführen.

2. Das Griechische kennt ferner ein *-es*-Neutrum *ἦθος* (seit Homer; die epische Sprache zeigt sog. Digamma-Wirkung!) 'was man gewohnt ist' = konkr. 'Aufenthaltsort, Wohnsitz' (so ep. poet. seit Il.), abstr. 'Verhaltensweise' (so Hes., Pi., ion.-att.). - Das Nomen läßt sich auf eine Grundform ***su̯ēd^h-es-*** zurückführen.

3. Parallel dazu findet sich das *-es*-Neutrum *ἔθος* (ion.-att.) 'Gewohnheit, Sitte, Brauch'. Es läßt sich auf ein ***su̯ed^h-es-*** zurückführen.

B. Das Zeugnis des Italischen

1. Das Lateinische kennt das Verbum ***suēscere***, ***suēvī***, ***suētum*** 'sich gewöhnen'. KELLER 1992, p. 151 vermutet als Ausgangspunkt der Verbalbildung das Part. Perf. Pass. *suē-to-*. RIX 1995, p. 400f. leitet den thematischen Stamm *suēsce-* aus **su̯ēdaske-* bzw. **su̯ē-d^hh_1-sk̑e-* her. Perf. *suē-vī* und Part. Perf. Pass. *suē-to-* seien sekundär durch Reanalyse von *suēscō* als *suē-scō* gewonnen worden.

2. Zu unserer Problematik dazu gehört ferner lat. ***sodāli-*** (vgl. Satricum ***suodālēs***) (Lit.: SIMONE 1980, p. 84 und SIMONE 1981) mit der Bedeutung: 'zu einer **su̯odā-* gehörig'. Als mögliche Ausgangsformen von **su̯odā-* sind uritalisch sowohl (a) **su̯odā-* als auch (b) **su̯ođā-* denkbar. Uritalisch (a) **su̯odā-* führt zu voruritalisch < (a1) **su̯odā-* oder (a2) < **su̯edā-*, uritalisch (b) **su̯ođā-* zu voruritalisch (b1) < **su̯od^{h}ā-* oder < (b2) **su̯ed^{h}ā-*.

C. Das Zeugnis des Indoiranischen

1. Die vedische Sprache kennt das Nomen *svadhā́-* (RV+), etwa 'Eigen-

heit, Eigenkraft, gewohnte Art, Wohnsitz', auch 'Trank, Trankspende, Schmalzspende für die Ahnen' (MAYRHOFER 1996, p. 789: "offenbar *sva-dhā́-* '*Selbst-Setzung'"). SCARLATA (1999, p. 264f.: 'Selbstbestimmung, Eigenheit, Disposition, Character', etc.; auch 'Wohnsitz') rechnet bereits im Uridg. mit der Neowurzel **su̯edʰh₁-*. Das Nomen *svadhā́-* wäre dann als ganz normale *-eh₂*-Ableitung zu betrachten und auf uridg. **su̯edʰh₁-eh₂-* oder **su̯odʰh₁-éh₂-* zurückzuführen. Der Ansatz einer auf Laryngal auslautenden Wurzel **su̯edʰh₁-* hat den Vorteil, daß bei einem allfälligen **su̯odʰh₁-éh₂-* auch der aus *-o-* entstandene ved. Wurzelvokal *-a-* lautgesetzlich ist.

2. Problematisch ist der Opferausruf ***svā́hā*** (RV+) 'Heil! Segen!' (MAYRHOFER 1996, p. 798: "Ist *s°* zunächst mit *svadhā́* zusammenzustellen ...? ... oder aus einer Verbform erwachsen ...?").

D. Sonstige Zeugnisse

1. Germanisch

Zu unserer Problematik gehört vermutlich ahd. ***situ***, mhd. ***site*** (bis ins 17. Jh.m.), ursprünglich weiter gefaßt 'Gewohnheit', seit 18. Jh. 'Brauch', daneben unter dem Einfluß von lat. *mores* seit ahd. Zeit moralisch-ethischer Begriff (Lit.: PAUL 1992, p. 892f.). Vgl. zu ahd. *situ* auch got. ***sidus*** m., altisl. ***siðr*** (Akk. Pl. *sidu*) m., aengl. ***sidu*** u.a.m. SEEBOLD 1989, p. 674 geht bei der Rekonstruktion des ahd. Wortes von urgermanisch ****sedu-*** aus. Diesem kann sowohl ein vorurgerm. **sedu-* als auch ein vorurgerm. **sedʰu-* zugrunde liegen.

2. sonst?

Mir sind keine weiteren Verwandten bekannt.

E. Urindogermanisch

1. Zur formalen Bestimmung: - Gr. *ἦθος* (s.o. A 2; bei Hom. mit Digamma-Wirkung!) und *εἴωθα* (s.o. A 1) gehen mit Sicherheit auf ein urgr. **su̯edʰ-/*su̯ōdʰ-* zurück. Gr. *ἔθος* (s.o. A 3) kann zwar theoretisch sowohl urgr. ****su̯edʰ-*** als auch ****sedʰ-*** fortsetzen, der Ansatz von **su̯edʰ-* ist aber nach Auskunft von *ἦθος* und *εἴωθα* bei weitem vorzuziehen. Ved. *svadhā́-* geht aller Wahrscheinlichkeit nach auf ein **su̯edʰh₁-éh₂-* oder **su̯odʰh₁-éh₂-* zurück (s.o. C 1). Die Annahme liegt somit auf der Hand, daß bereits das Uridg. eine ablautfähige Wurzel

*su̯ed^{h}h$_1$- besessen hat. Der ursprünglich auslautende Laryngal geht einzelsprachlich vor folgendem Vokal leicht verloren. Wenn lat. *su̯odā- aus urital. *su̯ođā-/*su̯eđā- und damit aus vorurit. *su̯od^{h}ā-/*su̯ed^{h}ā- herzuleiten ist, dann paßt es genau zum Vedischen. Wenn dagegen lat. *su̯odā- = urital. *su̯odā- aus vorurit. *su̯odā- bzw. *su̯edā- hergeleitet wird, dann könnte man es mit griech. ἴδιος < urgr. *su̯ed- vergleichen. Zum Germ. (s.o. D 1) ist Folgendes zu bemerken: Im Falle urgerm. *sed- < vorurgerm. *sed^h- paßt der Vergleich mit *su̯ed^h-. Als Problem bleibt der Anlautsunterschied *se- vs. *su̯e-.

2. Die uridg. Wurzel *su̯ed^{h}h$_1$- ist m.E. als Sekundärwurzel (Neowurzel) aus dem Nom. act. *su̯e-d^{h}h$_1$-éh$_2$- abstrahiert. Das Nom.act. seinerseits ist eine nominale Ableitung zum Syntagma *su̯e + d^{h}eh$_1$-. Weiteres s.u. Abs.5.

3. Zum Semantischen bemerkt SIMONE (1981, p.291): "un sintagma indoeuropeo come *swe dhē 'costituirsi in modo proprio' (rispetto al corpo sociale", und RIX (1995, p. 401 mit Anm. 9): "Sekundärwurzel *su̯ē-d^{h}eh$_1$- '*sich selbst als (Akk.) für/zu (Dat.) bestimmen" ... "Zur Semantik und Syntax cf. aaw. *humāim θβā ... dadəmaidē* Y.41,3 'als Wunderkräftigen ... bestimmen wir dich' ... Das Zitat und die morphosyntaktische Analyse der Sekundärwurzel verdanke ich einem Gespräch mit E. TICHY (Freiburg)".

4. Wie versteht man *su̯ēd^h(h$_1$)- neben *su̯ed^h(h$_1$)-? Ich kenne drei Vorschläge: - a) Durch Ablaut: Im Gr. hat man neben schwachem *su̯ed^h(h$_1$)-es- auch starkes *su̯ēd^h(h$_1$)-es- nach Vorbild von (zum Zeitpunkt der Bildung noch lebendigen) akrodynamischen Formantien? Vgl. dazu SCHINDLER 1975, p. 267. Dazu könnte dann von *su̯ēd^h(h$_1$)- aus auch Perf. *su̯e-su̯ōd^h(h$_1$)- gebildet sein? Wie ist lat. verbales *su̯ēđ(a)- aufzufassen? - b) Durch Dehnung: su̯ē neben *su̯e (> griech. ἕ) mit Dehnung im Monosyllabon. Vgl. RIX 1995, p. 401 Anm. 9. - c) Als Kasusform: *su̯ēd^h(h$_1$)- aus Syntagma mit prädikativem Instr. *su̯eh$_1$-. *su̯ed^h(h$_1$)- mit dissimilatorischem Schwund aus *su̯eh$_1$d^h(h$_1$)- oder der aus einem zweiten Syntagma mit *su̯e + d^{h}eh$_1$-? Vgl. SCARLATA 1999, p. 268 Anm. 371.

5. Parallelen?

5a) **Syntagma *méns + d^{h}eh$_1$-** - Vgl. ved. *medhā́-* f. 'Weisheit', av. *mazdā-* 'kundig'. Vgl. ferner HOFFMANN/FORSSMAN 1996,

p. 124; Mayrhofer 1996, p. 378; Scarlata 1999, p. 256-258. Also: Syntagma *méns + *d^{h}eh$_1$- ⇒ Nom.ag. *mn̥s-d^{h}h$_1$-éh$_1$- ⇔ Zugehörigkeitsadj. *mn̥s-d^{h}h$_1$-ó- und Nom.act. *mn̥s-d^{h}h$_1$-éh$_2$-

5b) **Syntagma *k̂red + d^{h}eh$_1$- ⇒ Nom.act. *k̂red-d^h(h$_1$)-éh$_2$-.** - Ved. *śraddhā́-* 'Vertrauen, Glaube, Hingabe' usw., vgl. Mayrhofer 1996, p. 663; Scarlata 1999, p. 262f.

5c) **Syntagma *i̯éu̯s + d^{h}eh$_1$-**. - Ar. **i̯áu̯š dhā-*, aav. *yaoš* ... [*yaož*]*dā*, jav. *yaoždā-*; elliptisch aav. *yaoš* = ved. *yóḥ*, vgl. Schindler 1975, p. 266.

5d) **Syntagma *mei̯Hs + d^{h}eh$_1$- ⇒ Ableitung *miHs-d^{h}h$_1$-ó-** = gr. *μισθός*, ved. *mīḍhá-* usw., vgl. Mayrhofer 1996, p. 357.

5e) **Syntagma *gr̥Hn̥s + d^{h}eh$_1$- ⇒ ? ⇒ Sekundärwurzel *gr̥H-d^{h}h$_1$-**: -. ved. *gūrdhayati* (1x RV), vgl. Jamison 1983, p. 82., Mayrhofer 1992, p. 493: vgl. ved. *gíras* + *dhā-* = aav. *garō* + *dā-* 'Preislieder darbringen' (gleiches Syntagma nach Campanile auch kelt. in **bardos*), Scarlata 1999, p. 267.

5f) **Syntagma *u̯i + d^{h}eh$_1$-** 'auseinander nehmen' ⇒ Sekundärwurzel *u̯id^h-: - ved. *vidh-* < **vi* + *dhā-* 'austeilen, zuteilen' (so zuerst P. Thieme; dann Hoffmann 1975, p. 238ff.); vorrigved. < **vi-dhant-* < *u̯i-d^{h}h$_1$-ént-.

5g) **Syntagma *sen + d^{h}eh$_1$-** 'absetzen': - H. Katz 1995 p. 108f.

5h) **Syntagma *n̥tér + d^{h}eh$_1$- ⇒**: vgl. Hettrich 1993, p. 147-176, hier speziell p. 169ff.

5i) **Syntagma *meĝh$_2$ + d^{h}eh$_1$- ⇒ Ableitung *m̥ĝh$_2$-d^{h}h$_1$-ó-**: - gr. *ἀγαθός*, vgl. Ruijgh 1998 (1991), p. 378ff. und Panagl 1995 p. 229-235; zu Panagl skeptisch Beekes 1997, p. 38.

F. Zusammenfassung

1. Syntagmen mit Wurzel *d^{h}eh$_1$- sind bereits uridg., und dazu gibt es einzelne nominale Ableitungen. Von diesen aus werden neue verbale Sekundärstamme (sog. Neowurzeln) gewonnen. Die Einsicht in die Bildefolge Syntagma > Nomen act. > Abstraktion der Sekundärwurzel scheint mir wesentlich. Scarlata 1999, p. 268 plädiert für die umgekehrte Reihenfolge: "Syntagmen ... haben offenbar schon in der Ursprache zu Neowurzeln geführt, von denen anscheinend regelmäßig Ableitungen und Verbalformen gebildet wurden ... Das Problem bedarf einer eingehenden Untersuchung".

2. Nach Abs. 1 ist das uridg. Syntagma *su̯e (ev. auch *su̯ḗ/*su̯éh₁) + d^heh_1- bereits uridg. Ebenso die nominale Ableitung *$su̯ed^hh_1$-$éh_2$- = **ved. *svadhā́-*, lat. *suodā́-**, und daraus wird immer noch in uridg. Zeit die verbale Sekundärwurzel *$su̯ed^hh_1$- neu abstrahiert. Zu uridg. *$su̯ed^hh_1$- bildet man immer noch in uridg. Zeit Nom.act. stark *$su̯ḗd^h(h_1)$-es-/schwach *$su̯éd^h(h_1)$-es- = **gr. ἦθος und ἔθος**, und einzelsprachlich vom starken Stamm *$su̯ḗd^h(h_1)$- aus **lat. *suēscō* und gr.** *εἴωθα*. Fraglich bleibt das german. Material (s.o. D I) mit *se-.

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On Latin instrument-nouns in */-lo-/[1]

BENEDICTE NIELSEN

0. Introduction and abstract

A number of Latin nouns in *-ulum* and *-ula* display certain morphological peculiarities that so far remain unexplained: *rēgula* "a measuring rod" from *regō*, *tēgula* "a roofing-tile" from *tegō*, *repāgula* "door-bars" from *repangō*, and *coāgulum* "rennet" from *coagō* all have lengthened root-vowels not inherent in the verbs they are derived from. Furthermore, *strāgulum* "a spread" from *sternō* displays an unexpected medial *-g-*, and *trāgula* "a javelin" does not have a reliable etymology at all.

These formations are usually thought to reflect a Proto-Indo-European (PIE) instrument-noun suffix **-lo-*. However, as will be pointed out in section II of the present paper, the assumption of such a suffix is combined with certain semantic and functional difficulties, whence I advance the hypothesis that this presumed instrument-noun suffix **-lo-* is in origin a variant of the well-established instrument-noun suffix **-tlo-*, reflected in Latin *-culum/-cula* (and its variants; see further below). In section III it will be shown that this hypothesis is corroborated by the fact that Latin *-culum/-cula* and *-ulum/-ula* are in complementary distribution.

A closer inspection of the etymologies of the above-mentioned lengthened-grade formations, undertaken in section IV, reveals that their hitherto enigmatic morphology may be considered regular if they are analysed as the reflexes of **-tlo-* formations or, in one or two cases, as diminutives of stems in **-to-*. The considerations leading to this conclusion enable us to suggest new etymologies for *trāgula* and *strāgulum*.

To maintain this new analysis of the said forms, it is necessary to adjust our perception of how certain consonant-clusters developed in Latin. The matter will be discussed in section V.

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[1] I am indebted to Jens Elmegård Rasmussen, Alexis Manaster-Ramer, Alexander Lubotsky, Rupert Thompson, and Michiel de Vaan for their valuable comments and criticism of the pages to follow.

I. The PIE instrument-noun suffixes

In current literature on PIE word formation it is assumed that instrument-nouns (with the semantic subgroupings of place-nouns and object-nouns) were primarily formed by means of one of the suffixes **-tlo-* (and its variants, discussed in the next section) or, less frequently, **-lo-*.

Interestingly, no other PIE suffixes appear to have been restricted to the formation of instrument-nouns. Being generally of neuter or feminine gender, the instrument-nouns in **-tlo-* and **-lo-* thus stand out from other deverbal, neuter/feminine nouns since these are primarily action-nouns – though they may secondarily have developed into object- or even instrument-nouns.

The most productive of the two instrument-noun suffixes, **-tlo-*, is sometimes assumed to be derived from the agent-noun suffix **-ter-* ~ **-tel-*;[2] i.e. it is thought to be a thematic "pertinentive" derivation, indicating "an object or location pertaining to the agent". According to this hypothesis, the **-tlo-* stems thus originated not as deverbal, but denominal formations – which would explain why they are semantically different from other deverbal suffixes. Though it may seem trivial, it is important to note that **-tlom*/**-tlah*$_2$ and **-ter-* ~ **-tel-* are of course to be considered two different suffixes. In other words, **-tlom* and **-tlah*$_2$ are no more the neuter/feminine of **-ter-* ~ **-tel-* than German *Metzgerei* f. "slaughterhouse" is the feminine of *Metzger* m. "butcher"

As for the origin of instrumental **-lo-*, it has been suggested that this suffix is identical to the PIE agent-noun suffix **-lo-* evidenced by such formations as Latin *figulus* "a potter", *bibulus* "a drunkard", *querulus* (adj.) "querulous" and Slavic active participles such as *neslъ* "(having) carried" or *sьlъ* "gone". The situation would be similar to that of e.g. English where an agent-noun like *teacher* and an instrument-noun like *shaver* are regularly formed by the same suffix. However, such a word-formation pattern is otherwise unparallelled in PIE, where the neuter counterpart of a masculine agent-noun is expected to have the meaning of an action-noun and only secondarily that of an instrument-noun. Thus, the neuter counterpart of **-ter-* ~ **-tel-* appears to have been the suffix **-ter-* which

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[2] See e.g. LEUMANN (1977: 312). The conditioning factor triggering either **-ter-* or **-tel-* is as yet unexplained.

formed action-nouns with the oblique stem **-t(e)n-*; such a stem is reflected in Latin *iter*, *itineris* "a going, journey, road".

As was just pointed out, we cannot compare the relationship that holds between agentive and instrumental **-lo-* with the one that holds between PIE **-tlo-* and **-ter-*, as the latter is one of derivation, not merely gender motion. To assume that instrumental **-lo-* is the neuter of agentive **-lo-* thus seems highly unmotivated.

There are two conclusions to be drawn from the above discussion, and they both concern the origin of the presumed instrument-noun suffix **-lo-*. On the one hand, it seems clear that we cannot relate this suffix to agentive **-lo-*, whence the homonymy of instrumental and agentive **-lo-* is most probably secondary and accidental. On the other hand, seeing that **-lo-* and **-tlo-* are the only suffixes confined to forming instrument-nouns, and that we have a plausible theory of the origin of **-tlo-*, but not of **-lo-*, there are good reasons to hypothesize that these two suffixes are in fact of common origin.

As will be seen in the following section, the two suffixes are already considered to overlap in certain positions in Latin.

II. PIE *-lo-* and **-tlo-* and their Latin reflexes

PIE **-tlo-* developed into Proto-Italic (PIt) **-klo-*, first and foremost reflected in Latin *-culum/-cula*[3] seen in e.g. *pō-culum* "a drinking vessel", *subū-cula* "an under-garment", or *vehiculum* "a carriage".

According to OLSEN (1989: 16), PIE **-tlo-* had the variant **-tro-* in position after roots containing liquids and possibly after roots in final *s*; this varaint is reflected in Latin *-trum/-tra* seen in *arā-trum* "a plough" or *rās-trum* "a drag-hoe". However, this distribution is no longer immediately observable in Latin. Thus, after roots containing *l*, we regularly find the suffix *-crum/-cra* in Latin. Unless we want to believe that PIE **-tro-* developed into **-kro-* after roots containing *l*, *-crum/-cra* can hardly be anything but a dissimilated variant of **-klo-*, originating after the development of PIE **-tlo-* > PIt **-klo-*, but before Latin anaptyxis turned the latter into *-culum/-cula*. Whereas **-klo-* must thus have been found in position

[3] PIt **-klo-* is reflected in e.g. Umbrian *piha-clu* (abl. sg.) "a sin-offering" and Oscan *sakara-klúm* "a sacred place".

after roots containing *l*, it has so far not been detected after roots containing *r*.

PIE *-*tlo*- had two more variants, traditionally reconstructed as *-*d^hlo-/-d^hro*- and reflected in Latin *-bulum/-bula, -brum/-bra* (*stabulum* "a standing-place", *crī-brum* "a sieve"). The selection of *-brum/-bra* versus *-bulum/-bula* follows the same principles as for *-crum/-cra* versus *-culum/-cula*. After roots in *l* we thus regularly find *-brum/-bra*, after roots containing *r* there is vacillation between the two variants; on the one hand we find presumably inherited *crī-brum*, on the other presumably younger *trī-bulum*.

As for the phonological conditions triggering the initial aspirate of *-*d^hlo-/-d^hro*-, probably the most widely accepted theory claims that this variant of the suffix originated in combination with roots in final voiced aspirates. In this position, Bartholomae's Law is thought to have caused progressive assimilation of voice and aspiration – as indeed it did regularly in Sanskrit, where a *-tra-* (IE *-*tlo*-) formation to a root like *duh* "milk" has the form *dóg-dhra-* n. "milk pail".[4]

A serious difficulty with this assumption is that whereas Bartholomae's Law is known to have applied regularly in early Indo-Iranian and subsequently in Sanskrit, it is questionable and still debated whether the law was at all operative in PIE; interestingly, quite a few scholars see precisely Latin *-bulum/-bula* etc. and its Greek and Slavic cognates, (Greek -θλον/-θλη, -θρον/-θρη, Slavic *-dlo*) as the primary evidence for the operation of the law in PIE.

The problem is, however, that reflexes of the presumed suffix-variant *-*d^hlo*- are never found in the position after stops of any kind, neither in Latin nor in PIE. This was demonstrated by OLSEN (1989). According to her survey, all inherited formations with Latin *-bulum/-bula*, *-brum/-bra*, and Greek -θλον/-θλη, -θρον/-θρη are exclusively from roots which can be reconstructed with a final PIE *h_1 or *h_2; thus Latin *fābula* "a narration" from PIE *b^hah_2, *crībrum* "a sieve" presumably from *kreh_1i̯, *stabulum* "a stable" from *steh_2, and *sūbulum* "an awl" from *si̯uh_1; in Greek we find such examples as πέλεθρον "a measure of land" from *k^welh_1, ἄεθλον "prize of con-

[4] Interestingly, Indo-Aryan *-tra-* only rarely combines with roots in final voiced aspirates. To my knowledge, there are no examples of *-tra-* formations from such roots in Vedic.

test" from *h_2*ueh*$_1$, (-)βάθρον "basis, foot" from *$g^w eh_2$, λύθρον "soiling" from **leuh*$_1$.

Since the distribution of these suffixes thus does not indicate that they originated in a Bartholomae context, OLSEN suggests that the conditioning factor was the presence of a root-final *h_1 or *h_2, which, she concludes, must have had a progressively aspirating effect on a following stop (alternatively, one might theorize that the process in question was one of metathesis). As *h_1 and *h_2 were probably voiceless, she reconstructs *-t^h*lo*- and *-t^h*ro*-.

These observations are of relevance to the discussion of the lengthened-grade *-*lo*- stems *rēgula, tēgula, repāgula*, and *coāgulum*. Andrew SIHLER has on two occasions (SIHLER 1979 and 1995: 77) suggested that these were in fact formed by means of *-d^h*lo*-, the presumed "Bartholomae" variant of *-*tlo*-. The idea is that suffix-initial *-d^h- was lost in this particular environment, with subsequent compensatory lengthening of the root-vowel. The phonological implications are discussed at length in SIHLER (1979), where it is for instance pointed out (p. 164f.) that a form like Latin *crēdō* < **ḱred-*d^h*eh*$_1$- might be seen as a parallel case. But SIHLER does not succeed in providing any decisive evidence in favour of the said hypothesis.

The main objection to SIHLER's hypothesis is that he wants to see the aspirated variant of *-*tlo*- in a position where, as we have just seen, that suffix is otherwise never found.[5] It does not help much that he also adduces *rādula* "a razor" and *tragula* "a sledge" (see the discussion in SIHLER 1979: 169ff.) as instances of such hitherto unnoticed *-d^h*lo*- formations. The former is derived from *rādō* "to scrape" with an inherent long vowel, and so it does not provide any evidence for the compensatory lengthening SIHLER wants to demonstrate. The latter is celebrated for meeting the conditions for Bartholomae's Law, since it is derived from a verbal root ending in a final aspirate. SIHLER points out (1979: 173-4) that

> "if truly inherited, *trāgula* would be a uniquely interesting formation: (1) it would add to the pathetically few attestations of Bartholomae's Law in Latin;

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[5] SIHLER in fact comments on this point: "... it is not desirable to think of these formations as being hugely ancient; the very occurrence of *-*dh*- after a plain stop suggests a rather late date (SIHLER 1979: 160)".

(2) it would be the only instance of *-dhlo-/*-dhro-
in the etymologically correct environment..."

But *tragula* is in fact never, in any of its three occurrences in Latin literature, attested in a metrical text, and so we have no evidence of a lengthened root-vowel in this word. The same holds for its apparently closely related synonym *tragum* which is also often quoted with a long *ā* (i.e. "*trāgum*"; see the discussion of these two words in section IV, B.3). Accordingly, even if the word does not contradict SIHLER's hypothesis, it does not provide any evidence in favour of it either.

Another objection that can be raised against SIHLER is that he fails to account for why these late *-d^hlo- formations are, with the exception of *rādula* "a razor", all formed from roots in Latin final *g* and, if we are to take *tragula* "a sledge" into account, *h*.

All in all, though offering an interesting solution to the problem of the long root-vowel in *rēgula*, *tēgula* etc., introducing *-d^hlo- in these formations creates another problem, namely the aberrant distribution of presumed *-d^hlo-. The assumption that we are dealing with *-d^hlo- formations in these cases accordingly seems unmotivated on the whole.

An alternative analysis should depart from the variant of the suffix actually expected in the phonological environment, namely PIt *-klo- < PIE *-tlo-, and furthermore explain the peculiarities common to these formations in the light of the fact that they are all formed from structurally identical roots. Bearing this in mind, we shall now proceed to have a look at the Latin reflexes of PIE *-tlo- and its variants occurring after root-final stops and compare them to the reflexes of the presumed PIE instrument-noun suffix *-lo-.

III. The Latin reflexes of *-tlo- and *-lo- in position after root-final stops

The instrument-noun suffix *-ulum/-ula* combines only with verbs in final stops. In the this section, we shall concentrate on instrument-nouns formed from roots in final stops in order to see whether *-ulum/-ula* can be shown to be in complementary distribution with those reflexes of *-tlo- which occur or are expected to occur in this position, i.e. *-culum/-cula, -crum/-cra*, and *-trum/-tra*.

In the position after root-final velar stops, *-culum/-cula* does

not seem to occur. However, after roots containing a liquid, we find two forms in *-(t)rum* or *-(c)rum*: *mulc-(t)rum* "a milkpail" from *mulgeō* "to milk", *fulc-rum* "a support" from *fulciō* "to prop up".

Interestingly, there are quite a few forms in *-ulum/-ula* in this environment. After <*c*> we find *spec-ulum* "a mirror" from *speciō* "to look", *vinc-ulum* "a band" from *vinciō* "to bind", *torc-ulum* "a press" from *torqueō* "to turn about", *coc-ulum* "a small vessel for cooking" from *coquō* "to cook", *iac-ulum* "a missile weapon" from *iaciō* "to throw", *amic-ulum* "a cloak" from *am-iciō* "to throw round one's self" and *bac-ulum* "a stick", presumably from PIE **bak*.

It has already been suggested by LEUMANN (1977: 313) that these formations reflect *-culum/-cula*, which was reduced to *-ulum/ -ula* in position after an unvoiced velar. The assumption is, I think, that the combination of *-klo-* with roots in final */k/* resulted in irregular clusters containing */-k-k-l-/* which were normalized through degemination: **/spek-klo-/* → **/spek-lo-/* > *speculum*. Such a process seems to be confirmed by the Latin/Greek pair *baculum/ βάκτρον* which appears to reflect PIE **bak-tlom* (**-tro-* being productive at the expense of **-tlo-* in Greek; see OLSEN (1989: 5)). But it should be noted that there are in fact just as many formations of this kind from roots in final *g*, to which LEUMANN's rule is not supposed to apply. This gives reason to suspect that the rule is wrongly formulated.

The formations from roots in final *g*, all to be further discussed in section IV, are: *rēg-ula* "a ruler" from *regō* "to keep straight, to rule", *tēg-ula* "a roofing tile" from *tegō* "to cover", *repāg-ula* n. pl. "door-bars, restraints" from *repangō* "to set or plant firmly", *ag-olum* "a cattle whip" from *agō* "to drive", *coāg-ulum* "rennet" from *cōgō* "to drive together", *iug-ulum* "a collar bone" from *iungō* "to yoke", and *cing-ulum* n. "a belt" from *cingō* "to gird".

After roots in final *-h*, we find one stem in *-iculum*, i.e. *vehiculum* "a carriage" from *vehō* "to drive" and one in *-ula*, i.e. *tragula* "a carrier, a sledge, a fishing-net" from *trahō* "to drag".

With roots in final labial stops, we find largely the same distribution as with roots in final velars. Thus, as expected, there are no *-culum/-cula* formations in this environment, but, after a root containing a liquid, one case of *-rum* presumably from *-trum*, namely *scalprum* "a chisel" from *scalpō* "to carve".

Apart from that, there is a handful of cases with *-ulum/-ula* and one with *-ulus*: *cap-ula* "a sacrificial bowl", *mūscip-ula* "a mouse-trap", *cap-ulus* (with irregular masculine gender) "a handle, a coffin"[6] all from *capiō* "to seize", *cōp-ula* "a bond" from an obsolete root still reflected in *aptus* "bound", *scap-ulae* "shoulderblades", presumably from PIE **skap* "to dig".

In position after dental stops, the situation is a bit more intricate, due to the assibilation of dental clusters in PIE as well as in Latin. *cae-lum* "a chisel" from *caedō* "to cut", *prōtē-lum* "a tandem team" from *prōtendō* "to extend", *scā-lae* "a ladder" from *scandō* "to climb", sometimes taken to be formed with a suffix **-slo-* or **-sli-* (thus LEUMANN 1977: 208), could be continuations of PIE **-tlo-* formations, assuming a development PIE **-TTl-* > PIt **-ssl-* > Latin *-l-* with compensatory lenghtening of the preceding vowel. After roots containing liquids, we find three **-tro-* formations: *rastrum* "a rake" from *rādō* "to scrape", *rōstrum* "a bill, a beak" from *rōdēre* "to gnaw" and *plaus-trum* "a wagon" seemingly from *plaudō* "to clap".

The equation of *sella* "a stool" from *sedeō* "to sit" with Laconian Greek ἕλλα "a seat" and OHG *sedal*, points towards an inherited PIE **-lo-* formation (**sed-lah₂*) and Latin assimilation of the group **-dl-* > **-ll-*. *grallae* "stilts" from *gradior* is enigmatic. The PIE root underlying this formation is assumed to have had a final d^h (PIE **g^hred^h*); as pointed out by LEUMANN (1977: 166), we accordingly expect a reflex ***grabulae* in Latin, with d^h > *b* / __ *l*. *rāllum* "a scraper" from *rādō* appears to be a parallel to *sella*, but we also find *rādula* "a razor" from the same root, but with a different structure. On the whole, *rāstrum, rāllum*, and *rādula* are illustrative of the uncertainty about what is to be considered the regular way to form an instrument-noun from a dental root in Latin.

The picture that emerges from the above is that whereas *-(t)rum/-(t)ra* is attested after labial as well as velar and particularly dental stops, though with loss of the initial *t* after velars and dentals, Latin delivers no direct evidence of PIE **-tlo-* in the position after stops; here, we find exclusively *-ulum/-ula*.

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[6] An alternative etymology might be suggested for *capulus* "a coffin": Lith. *kãpas* (4) "a grave" has no certain etymology, but might be assumed to reflect PIE **kap-os* "a grave", to which Latin *capulus* could be a metonymic diminutive.

Seeing that the two suffixes are in obvious complementary distribution, Latin thus delivers sufficient indirect evidence for the hypothesis that instrumental *-ulum/-ula* is a phonologically conditioned variant of *-culum/-cula*, generated by a rule deleting the suffix-initial stop (whether Proto-Latin **k* or PIE **t*) in position after stops. The reason why the two suffixes are usually not considered to be related is most probably that precisely such formations as *rēgula*, *tēgula* etc. do not appear to be analysable as *-*klo*- formations in the same way as *speculum* etc. are. These formations all preserve the voicing of the root-final velar and thus appear to bear no trace of the presumably lost suffix-initial stop. Indeed, parallel to *speculum* < PLat **spek-klom* or *fulc-rum* < *b^h*l̥g-trom*, a feminine *-*klo*- formation to *tegō*, PLat **teg-kla*, might be expected to yield Latin ***tecula*.

However, it can be argued that the suffix-initial *-t-* was in fact not lost without a trace. It has hitherto been overlooked that the verbs forming the bases of the enigmatic lenghtened-grade formations, *regō*, *tegō*, *repangō*, and *(co)agō*, are all subject to Lachmann's Law. This law applies to certain, not all, verbs based on roots ending in Latin voiced stops; it predicts that nouns formed from these particular verbs by means of suffixes with initial voiceless obstruents (mostly *t* or *s*) will display long root-vowels. Such lengthened vowels are encountered in the PPP's and *s*-perfects of the said verbs; *rēc-tum* and *rēxī* to *regō*, *tēc-tum* and *tēxī* to *tegō*, *pāctum* to *pangō* and *āctum* to *agō* thus display lengthening according to Lachmann's Law, as do other derivatives in *t*-initial suffixes from the same roots, such as *rēctor* "a leader", *tēctūra* "a covering over", *pāctiō*, "a pact".

So with respect to the root-vowel, these formations behave as if they were formed by means of a suffix with an initial stop. In this case, we have a very suitable candidate in PIt *-*klo*- < PIE *-*tlo*-. I do not think it matters much that all known examples of Lachmann's Law are with suffixes in PIt initial *t* or *s*: Lachmann's lengthening is assumed to be a compensation for the loss of voice in the root-final stop, and I see no reason why the law would not apply to formations in PLat *-*klo*-.

The assumption that the forms in question do in fact reflect original *-*klo*- formations is combined with the above-mentioned, obvious phonological difficulties. On the other hand, it meets the demands that were made for an alternative to SIHLER's hypothesis in

section II, in that the distribution of the unconditioned suffix variant *-*klo*- after stops would be perfectly regular, and the length of the root-vowel could be explained as the regular reflex of Lachmann's Law; thus we would be able to explain why these lengthened-grade formations are all derived from structurally identical roots. Furthermore, some of the most important examples of formation with the problematic PIE instrument-noun suffix *-*lo*- would be disposed of.

In the following section, the etymologies of the forms under debate will be discussed along with other such Latin nouns which appear to be instrument-nouns derived from verbs with a Latin root-final *g* or *h*. Apart from the forms already listed in section III above, ***strāgulum*** "a spread, a cover" and *trāgula* "a javelin" will be included, as these formations can be shown to be of significant relevance for a discussion of the phonetic developments of the forms treated here.

IV. Latin instrument-nouns in *-*ulum*/-*ula*

A. Derivatives from Lachmann verbs

1. *rēgula* "a ruler, a rule, a rod" is derived from *regō*, *rēxī*, *rēctum* "to keep straight, to rule" reflecting the PIE root *$h_3r^{(}\bar{e}^{)}\hat{g}$.

The long vowel in the Latin PPP is ascribed to Lachmann's Law. As is well known, the quantity of the nuclear vowel of PIE *$h_3r^{(}\bar{e}^{)}\hat{g}$ has been subject to several disputes. Notably, the short vowel in Latin *regō* and Greek ὀρέγω is in contrast with the lengthened grade in e.g. Sanskrit *rā́ṣṭi*, 3rd. sg. pres. "rules" presupposing PIE *$h_3r\bar{e}\hat{g}$. However, in Latin, short and long variants of this root are very systematically distributed. A long vowel in derivatives of this root is found in the following four categories:

> 1: *rēx* "king" and its derivatives such as *rēgius* "belonging to a king" or *rēgīna* "a queen, a princess"; here, the long root-vowel is clearly inherited, as is evidenced by Vedic *rā́j*- and Old Irish *rí*, both "king".
> 2: Derivatives from *regō* which meet the conditions for Lachmann's Law, such as *rēctor* "a ruler, a leader" or *rēctiō* "the act of directing".

3: *rēgula* and its derivatives such as *rēgulāriter* "by way of rule".
4: *rēgillus*, *-a, -um*, an adjective, the meaning of which wil be discussed below.

In all other cases, i.e. in *regō* and its derivatives not meeting the conditions for Lachmann's Law, the root-vowel is short in Latin; thus *rĕgimen* "guidance", *rĕgiō* "a direction". Thus, the only odd cases are *rēgula* and *rēgillus*. It seems reasonable to assume that these forms are either derived from *regō*, whence their long vowel must in some sense be related to Lachmann's Law, or that they are derived from *rēx* whence their long vowel is regular. The least preferable solution is, I think, to assume that any deverbal nouns in Latin derive their ablaut from the same source as Vedic *rā́ṣṭi*.[7]

In the case of *rēgula*, an obvious semantic connection to *rēx* is difficult to see. The word is, however, immediately analysable as an instrument-noun derived from *regō*, whence we may suggest a PLat pre-form **reg-kla*, formed with PIt **-klo-* < PIE **-tlo-*.[8]

But there is another possibility. An alternative attempt at an etymology was made by Isidorus Hispalensis (602-36 AD) who came close to suggesting that *rēgula* was derived from the PPP of *regō*:

> *regula dicta quod sit recta, quasi rectula...*(*Origines* 19.18.2)
> "The *rēgula* is so called because it is straight (*rēcta*), as if it were *rēctula*..."

Despite the phonological dificulties, I think it is fairly reasonable to assume that *rēgula* is in some way derived from *rēctus* and originally meant "a straight thing, a straight one"; its gender might be derived from or influenced by a feminine noun meaning "a rod" or "a stick", such as *virga, talea,* or *canna*. Thus, a pre-form **rēg-to-la* might be

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[7] Such an analysis is suggested by ISEBAERT (1992: 204), but to my mind rightly rejected by SCHRIJVER (1991: 127).

[8] It was noted in the above that OLSEN (1989) suggests that PIE **-tlo-* occurred in the variant **-tro-* in position after roots in *l*, *r*, and *s*, but that PLat **-klo-* in fact combines with roots in *l*, but in a dissimilated variant, reflected in Latin *-crum/-cra*. If *rēgula* reflects PLat **reg-kla* we now have evidence that PLat **-klo-* also combined with roots in *r*.

suggested as an alternative to **rēg-kla*. Most likely, the two forms, **rēg-kla* and **rēg-to-la*, would give the same output, as the latter would be affected by Latin syncope, and it seems that a rule *t* > *k* / __ *l* applied at all times in Latin.

rēgillus, -a, -um is a more complicated case. Even if it is not an instrument-noun, the word is included in the present discussion, because it has the same unexpected lengthened grade as *rēgula* and is formally so very similar to it.

The word has five occurrences in Latin literature. Its first encounter is in a comedy by Plautus. Here, it appears to be an adjective; it characterises a garment, which is apparently semantically opposed to an adjective meaning "beggarly":

> *Quid erat induta? an regillam induculam an mendiculam?* (*Epidicus* 223)
> "What was she wearing? A *rēgilla* garment or that of a beggar?"

Plautus exploits the fact that the word either is or at least sounds like it is somehow derived from *rēx*, possibly, as suggested by LEUMANN (1977: 306; he posits *"rēgīlla"*) via *rēgīna* "a queen, a princess". Whether the word actually meant "royal", "majestic", or "of a princess", or Plautus is just toying with an incidental formal similarity between etymologically unrelated forms cannot be ascertained from this quote.

The next attestation of the word is from Varro. Here, too, the word appears to be an adjective; note that as in the preceding quote, it precedes its substantive:

> *Regillam tunicam diffingitur purpura* (*Menippeae* 372)
> "The scarlet of a *rēgilla* tunic ..."

Basing himself on Plautus, Nonius (early 4th century AD) claims that the word is derived from *rēgius* "kingly" (or perhaps *rēgia* "a palace"?).

> *REGILLA vestis diminutive a regia dicta*... (Nonius 539.10)
> "The *rēgilla* suit is diminutively named after *rēgia*..."

Formally, it is almost unproblematic to analyse *rēgillus* as a derivative from either *rēgīna* or *rēgius*, but semantically, this analysis is not entirely convincing. As we shall see from the following attestation of the word, it refers to the weave of a tunic worn by brides the night before their wedding. As *rēgīna* means among other things "mistress" it could perhaps be suggested that the word means "of a mistress = of a coming bride".[9] However, a semantic connection to *regō* appears more obvious. Thus the following quote from Paulus' "Epitoma Festi":

> *Regillis, tunicis albis, et reticulis luteis utrisque rectis, textis susum versum a stantibus pridie nuptiarum diem virgines indutae cubitum ibant... ut etiam in togis virilibus dandis observari solet.* (*Epitoma Festi*, p. 289M):
> "Dressed in *rēgillas*, white tunics, and bright yellow *reticulas*, both of which are "straight", i.e. woven by weavers standing at a vertical loom, maids would go to bed... prior to the day of their wedding, as is usually seen with those about to receive their *toga virilis*"

This is the best and only definition of the word that we have. Unfortunately, it is not very clear how the passage *Regillis, tunicis albis, et reticulis luteis utrisque rectis* should be translated; depending on where we set the commas (which have been added by editors) *rēgillis* can be analysed as the ablative plural of 1) a substantive denoting a white tunic (*rēgilla = tunica alba*); 2) a substantive denoting a class of garments to which the white tunic as well as the bright yellow *reticula* belong (*tunica alba et reticula lutea = rēgillae*); 3) an adjective characterising a white tunic (*rēgilla tunica*). Perhaps the latter interpretation has the most in its favour, as the word appeared

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[9] It is probably not relevant to the present discussion that the adjective *rēgius* is in fact used once about a toga: *togam regiam ..., qua Ser. Tullius fuerat usas*. Pliny: *Naturalis Historia* 8,194 "a royal toga... which Servius Tullius used to wear". Servius Tullius was the sixth king of Rome; thus a *toga rēgia* means simply "a royal toga" or "the toga of a king". There is no evident connection between that garment and the one worn by a bride as far as I can see. Furthermore, *rēgia* follows its substantive in *toga rēgia*, whereas *rēgilla* is only attested before its substantive.

to be an adjective, and one preceding its substantive, in the above quotes from older sources.

The quote plays an important role in the semantic interpretation of *rēgillus*, as quite a few scholars take it as evidence that *rēgillus* is synonymous with *rēctus*, i.e. when referring to the weave of tunics, both are taken to mean "woven vertically". However, it is not clear that Pliny actually wants to tell us in the above quote that *rēgilla* and *rēcta* are synonyms; the passage could well translate as "a princess-style tunic .... is straight, ie. woven vertically...".[10] But the idea that they are synonymous finds support in the following quote by Pliny where *rēctus* appears in approximately the same context as in the above quote from Paulus/Festus:

> *Ea prima texuit rectam tunicam, quales cum toga pura tironi induuntur novaeque nuptae.* (*Naturalis Historia* 8,194)
> "She was the first to weave a *rēcta tunica*, the ones that are also worn, together with the *toga pura*, by the recruit and the newly wed maiden"

Note that *rēcta* here precedes its substantive, as does *rēgilla* in all of its attestations where we interpret it as an adjective.

We may conclude from the above that *rēgilla tunica* and *rēcta tunica* do indeed refer to the same garment. It would of course be highly relevant for our purpose if *rēgillus* could be taken to be derived from *rēctus*. Unfortunately, this assumption is not without formal difficulties. The suffix *-illus, -a, -um* is assumed to have arisen after forms like **akslo-la*, **pastni-la* etc., underwent syncope (> **aksl̥la*, **pastl̥-la*) and yielded *axilla* and *pastilla*. Accordingly, if *rēgillus* is derived from *rēctus* it seems that it has to be a post-syncope formation, and it is not clear why the output would not be ***rēctillus*.

I think we have to conclude that the etymology of this word remains uncertain, but that further research into the development of

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[10] It should be noted that formally, *rēgilla* has the immediate appearance of being a metonymic diminutive of *rēgula*; I haven't discussed this possibility because it lacks semantic motivation (the *rēgula* was not an instrument employed in weaving).

clusters involving *-t-* and *-l-* in Latin may shed some more light on this formation too and confirm the relationship with *rēctus*.

2. ***tēgula*** "a roofing tile" and *tēgulum* "roofing" are derived from *tegō, tēxī, tēctum* "to cover" reflecting the PIE root **teg*. The long vowel in the Latin PPP is ascribed to Lachmann's Law.

Semantically, both *tēgulum* and *tēgula* may reflect instrument-nouns in **-klo-* (PLat **teg-kla*); *tēgula* however is also analysable as a metonymic[11] diminutive of *tēctum* "a roof", i.e. **teg-t(o)-la*.

3. ***coāgulum*** "rennet" is derived from *cōgō, co-ēgī, co-āctum* "to drive together to one point, to assemble" reflecting the PIE root **h₂aĝ*. The long vowel in the PPP is ascribed to Lachmann's Law.

Unexpected long vowels in derivatives from the same root appear in the third-declension nouns *ambāgēs / ambāgō, -inis* f. "a going round" and *indāgō/indāgēs* f. "an exploration".

Semantically, *co-āgulum* is readily analysable as an instrument-noun, PLat **kom-ag-klo-* derived from *cōgō*.

4. ***agolum*** "a cattle whip" is clearly an instrument-noun derived from *agō, ēgī, āctum*. As was mentioned in the previous paragraph, the long vowel in *āctum* is ascribed to Lachmann's Law.

The form is dialectal and attested in Paulus' *Epitoma Festi* (*Agolum pastorale baculum, quo pecudes aguntur*; MÜLLER, p. 29). Here, the quantitiy of the root-vowel is not known; on the basis of *co-āgulum* derived from the same root it can perhaps be assumed that it is long, and that *agolum* reflects what would be Standard Latin *ˀāgulum* from PIE **h₂aĝ-tlom*. This could be an inherited formation, as the very same reconstruct is presupposed for Vedic *ā́ṣṭrā* f. and Young Avestan *aštrā* f. both meaning "a whip".

5. ***repāgulum***, only attested in the n. pl. "door-bars, restraints", is derived from *repango, repēgī / repānxī, repāctum* "to set or plant

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[11] Gender assignment of metonymic diminutives is independent of the gender of the base word; thus *armilla* "a bracelet" from *armus*, *capillus* "hair of the head" from *caput* n. "head". A discussion of the semantic sub-groupings of the so-called diminutive is found in NYMAN (1977).

firmly", which has a long vowel in the PPP usually ascribed to Lachmann's Law.

There are various difficulties with the reconstruction of an underlying root for *pangō*; see a specific discussion in SCHRIJVER (1991: 97). A point of relevance to the present discussion is the length of the root-vowel.

On the one hand, the Latin verb displays a short vowel in the perfect stem of the simplex verb (*pepigī*), pointing towards a Latin root *pag* which may also be the base of the nasalised present stem *pangō* and, with Lachmann's Law, of the PPP *pāctum*.

On the other hand, a long root-vowel appears regularly in nouns derived from *pangō*. First of all there is the third declension stem *pāgēs*, according to Nonius 64.28 *compāctiō* "a joining together". The same stem-formation occurs in *compāgēs* (also *compāgō, -inis*) also "a joining together", *impāgēs* "a border surrounding the frame-work of a door", *prōpāgēs* (also *prōpāgō, -inis*) "a set; offspring", and *repāgēs*, poetic for *repāgulum*. Further derivatives are *pāgina* "a page", and *pāgus* "a district" and their derivatives.

The long vowel in these formations is often assumed to be archaic, a view which finds support in such forms as Greek πήγνῡμι "to stick, to fix in" or πηγός "solid". SCHRIJVER (1991: 97) accordingly posits a PIE root *$peh_2\hat{g}$ and suggests that it is the full grade of this root that is reflected in its long-vocalic derivatives. The short vowel reflected in the Latin verb might then reflect the nil-grade, *$p\partial_2\hat{g}$, of the PIE root.

However, despite the external evidence for a PIE root *$peh_2\hat{g}$ I think there are good reasons to speculate whether the lengthened-grades found in Latin are in fact all secondary and depart from a Latin short-vocalic root *pag*. We have seen that instrument-nouns in *-ulum/-ula* derived from Lachmann-verbs regularly display lengthened grades; thus the long vowel in *repāgulum* does not necessarily adduce any evidence of an inherited lengthened-grade in Latin. The majority of the lengthened-grade nouns in *pāg-* are third declension *ē-* or *n*-stems of the type *(-)pāgēs* and *(-)pāgō*. We have just seen two examples of lengthened-grade in such stems derived from another Lachmann-verb, *ambāgēs/ambāgō* "a going round" and *indāgō-/indāgēs* f. "an exploration". To this little collection we may add *contāgēs* and *contāgiō* "contact" from another Lachmann-verb, *tangō, tetigī, tāctum* "to touch". Though the material is small, it very

much looks as if lengthened-grade is regular with this stem-type in Latin, when the base word is a Lachmann verb. Other lengthened-grade formations from *pangō* are *pāgina* and *pāgus*. The *-ina* of *pāgina* is very rare as a deverbal suffix; I am only aware of one formation that might be considered parallel to *pāgina*, namely *sarcina* "a package" from *sarciō* "to patch". It seems plausible, then, that *pāgina* is derived from an *n*-stem of the type reflected in *compāgō* or *repāgō*. The only stem that falls outside the general picture of *ē*- and *n*-stems is thus *pāgus*. Hence, I suspect that further research into the origin of the lengthened-grades in derivatives of *pangō* might reveal that *pāgus* is in fact the only irregular lengthened-grade derivative of *pangō* in Latin.

B. Derivatives from non-Lachmann verbs

1. *cingulum* n. "a belt" is derived from *cingō, cīnxī, cīnctum* "to encompass, gird", probably reflecting a PIE root **kenkʷ*.

The word is readily analysable as an instrument-noun. We shall posit PLat **keng-klom.*

2. *iugulum* "a collar bone" is from *iungō*, *iūnxī*, *iūnctum* "to yoke, to join" reflecting the PIE root **(H)i̯eu̯g*.

LEUMANN (1977: 311) lists *iugulum* under instrument-nouns, a point which is counterargued by SIHLER (1979: 169) in the following discussion of the etymology of the word (remember he wanted to analyse **rēgula* etc. as **dʰlo-* formations):

> "*Iŭgulum* 'collar-bone; throat' on account of its short vowel must be taken as an instance of a *t*-less, or rather **dh*-less, formation. Functionally too it can hardly be taken as a specimen of a tool formation, since it is hardly 'something you use to yoke with', but rather a 'yoker' (**-lo-* pseudo-participle) or even a 'little yoke' (diminutive)."

I think we can discard the notion of a "**-lo-* pseudo-participle", but I agree that analysing *iugulum* as an instrument-noun is not entirely logical either. As SIHLER points out, the collar-bone does not have the function of a yoke, but it is reminiscent of it in regard to its shape and placement in the body. Thus *iugulum* must be a metaphor-

ic or pertinentive formation, which obviously must derive its form from that with which it is compared. It could be assumed that there was originally an instrument-noun *iugulum* meaning "a yoke" which was metonymically applied to the collar-bone. There is no evidence to support this assumption. It is an established fact, however, that *iugum* "a yoke" is an inherited word, whence I would opt for SIHLER's alternative suggestion, whereby *iugulum* is a diminutive of the latter. The meaning would probably be metonymic, i.e. "a bone which is reminiscent of a yoke". The word can thus be left out of the present discussion.

3. ***tragula*** "a carrier, a sledge, a fishing-net"[12] is derived from *trahō*, *trāxī*, *tractum* "to drag, haul, draw". The PIE pre-stage of the verbal root underlying this verb is uncertain; see the discussion in SCHRIJVER (1991: 188-189). We shall posit PIt **tragʰ*. Pace SCHRIJVER (1991: 189), there is no evidence that this verb had a long vowel in Latin; thus the long vowel in the *s*-perfect *trāxī* is regular and may be inherited from the PIE *s*-aorist, cf. *vehō, vēxī, vectum*. Derivatives from this verb are thus not expected to display lengthened grade in the root.

In SCHRIJVER (1991: 189), *tragula,* and indirectly *tragum*[13] "a fishing-net", play a prominent role for the determination of the structure of the PIE root reflected in Latin *trahō*, because most works of reference posit a long root-vowel in both nouns (i.e. *"trāgula"*, *"trāgum"*). However, I have found none of these words to be attested in metrical texts, and it appears that the quantity of the

[12] The three attestations of *tragula* are: Varro's *De Lingua Latina* 5, 139 ("a carrier"), Jordanes' (fl. AD 552) *De Reb. Geth.* LV 280 ("a sledge"), Pliny's *Historia Naturalis* 16. 34; (here, the word appears to mean "a fishing-net", most probably "a trawl").

[13] *tragum* "a fishing-net" (attested for the first time in Servius' comment on Vergil's *Georgica*, i.e. in the early fourth century AD) is taken by WH to be a back-formation from *tragula*, as a thematic derivative of *trahō* is expected to display medial *-h-* (***trahum*); this explanation is accepted by SCHRIJVER (1991: 189). It is slightly problematic, however, that the two words are of different gender. It should be pointed out that in the one attestation of presumed *tragula* meaning "fishing-net" (Pliny's *Naturalis Historia* 16. 34) the word occurs in the dative plural (*tragulis*), whence we might think of a neuter stem *tragulum* "fishing-net" which might be or have been considered to be the diminutive of *tragum*.

vowel can only be ascertained on an etymological basis. I suspect that the assumption of a long vowel results from the identification of *tragula* "a carrier etc." with *trāgula* "a missile weapon" to be treated below which has an undisputed long vowel. As we shall see, the two words are probably not related at all, whence any textual evidence for the quantity of the root-vowel in *tragula* "a sledge" appears to be missing. As the word is obviously derived from a base with a short vowel, the safest thing is to assume that *tragula* had a short root-vowel as well.

It should be mentioned that *tragula* has a synonym in *traha / trahea*[14] "a carrier, a sledge", the earliest attestation of which is found in Virgil's *Georgica* 1.164. Here, Virgil speaks of *plaustra tribulaque traheaeque*; similarly, Jordanes (6th century AD) speaks of *plaustraque et tragulas* (*de Reb. Get.* 55) and thus seems to confirm that the two are synonymous. Unfortunately, there seems to be no possibility of analysing PIt **trag^h-lā* as the diminutive of **trag^h-ā*, the pre-form of *traha*, since the comparative evidence shows that the PIt diminutive-suffix was **-elo-*, not **-lo-*. A pre-form **trag^h-elā* is expected to yield ***trahula.*

Hence, we shall postulate PLat **trag^h-klā*.

4. ***trāgula*** "a missile weapon, a javelin" has not found an acceptable etymology so far, since it is not clear from which verb it might be derived.

Seeing that the weapon is often found in the hands of Gauls, Bretons, and Celtiberians, some have speculated that the word is of non-Latin origin. However, the Roman authors (I have found 23 attestations of the word) do not mention this possibility at all.

We find two different attempts at an etymology in the Latin literature. According to Paulus, the word is derived from *trahō*:

> *tragula genus teli, dicta quod scuto infixa trahatur.* (*Epitoma Festi,* p. 367M)
> "The *tragula* is a kind of missile weapon, so-called because it can be pulled out when it has been driven into a shield"

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[14] In late Latin, we also find *traga* and *tragua* in the same sense.

This etymology is sometimes seen to be corroborated by a passage in Caesar's *De Bello Gallico* (5.48.5) where we find a *trāgula* fitted with a so-called *ammentum*, a sort of throwing-strap. It has been suggested that this strap was precisely useful for pulling out the javelin when it had become stuck somewhere. However, the real purpose of the *ammentum* was to cause the weapon to rotate and thus to have more stability in its course, and the *trāgula* was not unique in having an *ammentum* fastened to it. Furthermore, none of the other attestations of *trāgula* that I have found mention it being pulled out of anything. Accordingly, it is very difficult to establish a semantic relationship between *trāgula* and *trahō*.

On the formal side, there are further problems with this etymology. *trāgula* displays a long root-vowel (secured by metrical evidence)[15] not reconciliable with the short one in *trahō*. All in all, Festus' analysis is best discarded as a folk-etymology.

The second attempt at an etymology is found in Varro's *De Lingua Latina*; in a chapter dealing with missile weapons, Varro states:

> *Tragula de traiiciendo.* (*De Lingua Latina* 5.115)
> "the *tragula* owes its name to the fact that it is used for stabbing"

I have translated *trāiicendo* with "stabbing" here, because this appears to be the meaning associated with the *trāgula*. The basic meaning of *trāiiciō* is "to throw or hurl across", and furthermore "to stab, to pierce". Forms of *trāiiciō* in the latter sense are three times found constructed with *trāgula*.[16]

Varro's etymology thus has obvious semantic advantages, whence it may be suggested that *trāgula* "a javelin" reflects PIt **trā-i̯ak-klā* – an instrument-noun in **-klo-* derived from *trāiiciō*. Such a form can be assumed to have developed along the following lines: First of all, assuming that the form dates back to Italic, it might have been subject to the regular Italic loss of intervocalic *i̯*.

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[15] Plautus' *Epidicus* 5.2.25, *Pseudolus* 1.4.13, *Casina* 2.4.18, Varro *Menippeae* frag. 293. I owe many thanks to Professor James Diggle for discussing this matter with me and for throwing an expert's eye on these attestations.

[16] Caesar's *De Bello Gallico* 5.35.6, Varro's *Meleagris* 5.115, Valerius Maximus' *Dictorum Factorumque Memorabilium Exempla* 2.23.

Second, if the suffix had a *k* (i.e. if it was **-klo-*), that *k* would most certainly be lost by the same process as was witnessed in *speculum* from **spek-klom*.

These processes would lead to a preform **trāk-la*, which, with regular anaptyxis, is expected to yield ***trāc-ula*. A closely related formation is *iaculum* "a javelin" derived from *iaciō*. In section V it will be discussed why these two words might have developed differently, though they appear to be derived from the same verbal root.

5. *strāgulum* n. "a spread, a covering, a rug, a horse-cloth", and *strāgula* "a pall, a horse-cloth" are derived from *sternō, strāvī, strātum* "to spread out, to throw down" reflecting the merger of two PIE roots, **sterh₃* and **ster*.

strāgulum is of course not an instance of an instrument-noun formed to a root in final *g*; however, the word is included here because, as will be shown in section V, certain details of its history make it highly relevant for the present discussion.

An obviously related formation is the adjective *strāgulus* "that serves for spreading or covering". An enigmatic feature in these formations is the medial *-g-* which appears to come out of nowhere, as the base verb, *sternō*, has no such phoneme, and there is of course no suffix ***-gulus, -a, -um* in Latin.

A stem *strāg-* is furthermore found in the third-declension noun *strāgēs* f. "an overthrow, a massacre".

As *strāgulum, strāgula*, and *strāgulus, -a, -um* are thus morphologically highly enigmatic, conclusions, if any, about their etymology are to be based on semantic evidence. A point of immediate relevance is that the adjective *strāgulus, -a, -um* appears to be synonymous with the PPP of *sternō*, i.e. *strātus, -a, -um*, and that likewise the substantive *strāgulum* is synonymous with the substantivized neuter of the same participle, *strātum*; both mean, among other things, "a pall, a horse-cloth". Thus, if only the semantic evidence is taken into account, it appears fairly reasonable to assume that the adjective *strāgulus* is the diminutive of the PPP, and that the substantive *strāgulum* is the diminutive of substantivised *strātum*. *strāgulum* thus appears to reflect earlier **strāto-lom*. I think suggesting a PLat **-klo-* formation **strā-klom* is problematic here, since this assumption could hardly explain the adjective.

V. An attempt to clear up the phonological details

The aim of the present paper was to explain the morphological peculiarities of a small group of Latin instrument-nouns in _-ulum/-ula_. Four of these, _rēgula_, _tēgula_, _co-āgulum_ and _repāgula_, display an unexpected lengthened-grade root. As these formations were derived from verbs to which Lachmann's Law applies, it was suggested that the lengthened grade is somehow related to that law. A comparison with non-Lachmann verbs show that these do not display similar unexpected lengthened-grades; thus e.g. _speculum_ from _speciō_ or _tragula_ from _trahō_.

It was suggested that the formations in question were in fact the regular outcome of PIt _*-klo-_ (< PIE _*-tlo-_) formations or, in one or two cases, syncopated diminutives of _*-to-_ formations, whence the long vowel might be the regular reflex of Lachmann's Law. Such an analysis appeared to be semantically very defendable, but it is not quite obvious how the said reconstructs would yield the attested output forms. This question will be subject to closer inspection in the present section.

The reconstructs fall into two categories: Instrument-nouns in PLat _*-klo-_ and diminutives to _*-to-_stems; thus the following reconstructs were proposed for PLat:

*reg-klo- or _*reg-to-lo_	>	_rēgula_
*teg-klo- or _*teg-to-lo-_	>	_tēgulum/tēgula_
*-pag-klo-	>	_(re)pāgula_
*-ag-klo-	>	_co-āgulum_ (and _agolum_?)
*keng-klo-	>	_cingulum_
*trag^h_-klo-_	>	_tragula_

An obvious obstacle for the suggested etymologies is that in the reconstructs, the root-final voiced _-g-_ is found in position before an unvoiced stop, whence the first thing we expect to take place is regressive devoicing (_*-gt-_ → _*-kt-_).

Apart from that, we may assume that Lachmann's Law applied before Early Latin syncope (by the mid fifth century BC). Assuming (as is usually done) that _t_ > _k_ / _ _l_ applied at all times, and that _*-k-_ was lost in position between a stop and _*-l-_ (in the cases at hand _*-kkl-_ > _*-kl-_), these processes would presumably yield _*rēk-la_, _*tēk-la_, _*repāk-la_, _*(-)āk-lom_ and, in the case of the non-Lachmann verbs, _*kink-lo_ and _*trak-la_. Here, we would expect anaptyxis,

and, in the third century, development of *o* > *u* in final syllables. Thus, the expected output forms are, I think, **rēc-ula*, **tēc-ula*, **co-āc-ulum*, **re-pāc-ula*, **cinc-ulum* and **trac-ula* with devoicing of the root-final velar due to the impact of the lost suffix-initial dental.

A seemingly easy way to solve this problem is to assume that the voicing of the final stop was analogically reintroduced; in the case of *tragula* this would have had to happen before the working of anaptyxis, as PIt g^h would only yield Latin *g* in the immediate vicinity of *l*.

Interestingly, however, there are two further cases where the proposition of meaningful etymologies is precisely obstructed by the presence of a voiced velar, not an unvoiced one, in the output form. The material included two instrument-nouns in Latin *-lo-*, namely *strāgulum* and *trāgula*, which are not derived from roots in final *g*, but are however formally very similar to *rēgula*, *tēgula* etc. On a mainly semantic basis, the following etymologies were suggested:

**strāto-lo-*	>	*strāgulum*; *strāgulus, -a, -um*
**trāi̯ak-kla*	>	*trāgula*

**strāto-lo-* is, after undergoing syncope, assumed to yield **strāk-lo-m*, as Latin *-t-* yielded *-k-* in position before *-l-*. This form is expected to yield **strāculum*, a form which differs from *strāgulum* only in the lack of voice in the medial velar.

The same problem presents itself when regular sound laws are applied to **trāi̯ak-kla*. As was argued in section IV.B.3 this preform is expected to yield **trāc-ula*, just as PIt **i̯ak-klom* yielded *iaculum*. Again, the former differs from the actually attested output form only with respect to the voicing of the root-final velar.

That the *k* of **strāk-lom* and **trāk-la* would not be subject to regular voicing seems to be indicated by such formations as *pō-culum* "a drinking-vessel" from PIE *peh_3-tlom* and *sub-ū-cula* "underwear" from PIE *-(H)ou̯-tleh_2*, where PLat **k* did not yield *-g-* under very similar circumstances. The only structural difference between *strāg-ulum* and *trāg-ula* on the one hand and *pō-culum* and *sub-ū-cula* on the other seems to be the placement of the morpheme-boundaries. If the – to my mind very attractive – etymologies suggested here for *strāgulum* and *trāgula* are to be maintained, it might be sug-

gested that PLat /k/ underwent voicing in position after a long vowel and before a morpheme boundary.

This is of course so far an ad hoc rule since it appears to apply only to *strāgulum* and *trāgula*; it still remains to be seen if there are further examples confirming it. Relevant to us is the question whether such forms as *rēgula* and *tēgula* owe their voiced *-g-* to such a rule (i.e. that they reflect **rēcula*, **tēcula*) or to a mere restitution of the original root-final voiced velar, as must probably be assumed in the cases of *cingulum* and *trăgula*. To answer this question I think we have to look further afield and into other derivational patterns which might provide an environment similar to the one found in the derivatives discussed here.

VI. Concluding remarks

I think it has been made plausible on the preceding pages that Latin delivers no evidence for an independent PIE instrument-noun suffix **-lo-*; the Latin instrument-noun suffix *-ulum/-ula* is a mere conditional variant of *-culum/-cula*. Evidence in favour of this assumption is found partly in the complementary distribution of the Latin instrument-noun suffixes which are all reflexes of PIE **-tlo-* and its variants, and partly in instrument-nouns in *-ulum/-ula* derived from Lachmann-verbs, as such nouns display lengthened-grade of the root and thus confirm that the suffix originally had an initial stop.

However, as we have seen, nouns derived from Lachmann-verbs tend to display long root-vowels in contexts where we do not expect it. I am thinking of such formations as *compāgēs/compāgō*, *ambāgēs/ambāgō*, and *contāgēs/contāgiō*. I shall dedicate a further study to the history of these stems with the aim of clarifying the origin of their irregular ablaut.

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The Complex of Nasal Stems in Indo-European

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0. The history of nasal stems and their secondary derivatives is a complex matter, even by Indo-European standards: Sometimes we find clear traces of an original apophonic and accentual variation, sometimes not; in a number of cases there is a conspicuous vacillation between stems in **-n-* and **-nt-* with further links to the heteroclitics for which one may try to find either a functional or a phonetic explanation; and finally some *n*-stems obviously contain a laryngeal in the suffix while an interpretation of this sort is less compelling, if not precluded, in other cases. Incidentally it still remains to be made absolutely clear how many basic suffixes we are dealing with, and how their formal and functional characteristics should be defined. In the following sketch I shall try to scratch a bit in the surface and hint at a few possibilities for a basic classification covering part of the original system, as a follow-up on my paper from the UCLA Conference of 2000 (OLSEN 2001) and earlier works, and seen in the light of recent scholarship, notably the important articles by MELCHERT (2000), OETTINGER (2001) and PINAULT (2000), and the contribution by JOSEPHSON to the present volume.[1]

First of all it may be observed that when a suffixal derivative ends in a nasal or a nasal cluster this is always **-n-* or **-nt-*, while stems ending in **-m-* are at best extremely rare. Furthermore opaque, lexically isolated formations like Skt. *plīhán-*, Lat. *lien*, Gk. *σπλήν* 'spleen' or Hitt. *hāras* etc. 'eagle' and their ablaut pattern (cf. most recently RIEKEN, this volume), the analysis of complex **-n(t)*-suffixes like **-me/on(t)-* and **-u̯e/on(t)-* and the relation between **-n(t)*-stems and heteroclitics will be left out of the discussion for the present purpose, and I shall confine myself to some remarks on 1) the "individualizing" suffix(es) **-n-* and/or **-nt-* and 2) the "Hoffmann suffix" *-$h_3on(h_2)$-.

[1] A more detailed discussion, including a survey of secondary **n-* and **nt*-stem derivatives, will be presented in OLSEN in preparation.

1.1. Primary "n-stems"

1.1.0. In a rough classification of what is traditionally considered primary, simple *n*-stems whose root segment is otherwise attested it is possible to distinguish between at least two types of derivational basis:

1.1.1. In derivatives based on verbal roots or stems the meaning is usually that of an agent noun, cf. e.g. Av. *spasiieiti* 'watches' ~ *spasan-* '(somebody) watching', Goth. *wait* 'knows' ~ *(un-)wita* '(un-)knowing', Lat. *bibere* 'drink' ~ *bibō* 'somebody drinking, a drunkard'.

1.1.2. When the base word is an adjective, we arrive at the individualizing or definite derivational type underlying the weak adjective in Germanic, e.g. Goth. *sa blinda* 'the blind one', substantives like Goth. *weihan-* 'holy person, priest' from *weihs* 'holy' (MEID 1967: 92f), and similar formations from other branches of the IE family such as e.g. Av. *marətan-* 'a mortal, man', Gk. Στράβων from στραβός 'squinting' etc. (CHANTRAINE 1933: 161), the Latin type of cognomina, *Rūfō* from *rūfus* 'redhaired', *Catō* from *catus* 'cunning' (LLF 361), and, as noted by MELCHERT (2000: 70), Lycian personal names like *Xudalijẽ* 'the nimble one' or the like.

1.1.3. Examples where the derivational basis is a substantive are doubtful. One might consider a class of derivatives where the addition of the suffix would seem to trigger the creation of a personal, frequently pejorative noun, typically a nickname like Gk. γνάθων 'chubby' from γνάθος 'jaw', γάστρων 'pot-belly' from γαστήρ 'belly', or Latin *Nāsō* from *nāsus* 'nose',[2] *Buccō* from *bucca* 'mouth' or *Frontō* from *frons* 'forehead', or sporadic examples from Germanic like e.g. ON *kampi* 'moustached' from *kampr*. It is a well known phenomenon that a particularly prominent characteristic may be used to denote the whole person, as is the case of compound adjectives (bahuvrīhis of the type ῥοδοδάκτυλος, cf. SCHINDLER 1986), and it is quite conceivable that even a simplex could be used in this sense as a pars pro toto, cf. e.g. *Captain Hook* or *The Voice*. However, this category, in so far as it is inherited at all, could with at least equally good reasons be connected with the "Hoffmann suffix" (cf. the discussion in section **2.**).

[2] The Latin examples may be imitations of the Greek pattern, cf. LLF: 361.

1.1.4. The functional similarity between the two (or theoretically three) subgroups is quite obvious, and in fact, if the original nucleus of type **1.1.1.** is based on root nouns like **spek̂-* (cf. the root noun of Av. *spas-*, Skt. *spáś-*, Lat. *(au-, haru-)spex* 'watcher' vs. *i̯*-present in Av. *spasiieiti*, Skt. *páśyati*, Lat. *speciō*) ⇒ **spek̂-on-* (Av. *spasan-*), rather than on verbal stems,[3] these *n*-stems may be summarized as denominal derivatives denoting individuals characterized by the base word: a **spek̂on-* is someone whose essential function is that of watching, while *Rūfō* is a person characterized and singled out as being redhaired.[4]

1.2. Primary "nt-stems"

1.2.0. Beside the *n*-stems there exists a category of primary *nt*-stems, and as in the case of the *-n*-stems we may point to different types of derivational basis.

1.2.1. When the base word is a verbal root or stem the addition of *-nt-* results in the (active) *nt*-participle, **dr̥k̂-ént-* 'watching' (> Gk. δρακείς, cf. FORSSMAN 1964), **bʰéro-nt-* 'carrying, bringing' etc.

1.2.2. Furthermore, a denominal type in **-nt-* based on adjective stems has been observed. The evidence is particularly clear in Anatolian, but

[3] Cf. MEID 1967: 93 on Germanic adjectives in **-an-*: "primäre Ableitungen von Verbalwurzeln, z. T. wohl auch Erweiterungen alter Wurzelnomina".

[4] A potential partial contamination between the suffixes **-e/on-* (individualizing) and the "Hoffmann suffix" **-h₃on-* (i.e. probably **-h₃onh₂-*) as assumed by JASANOFF (1980; cf also HAJNAL 1997: 45ff) on the basis of the nom.sg.masc. of the weak adjective in OHG *-o* (allegedly from **-o(h)o-*) would be easy to explain in consideration of the partial functional overlap between the two types: with a substantival basis, e.g. **nās-ō(n)* (individualizing) could be 'the Nose, Mr. Nose', while a "Hoffmann formation" would mean 'having a blemish of a nose, a conspicuous nose' (cf. section **2** for the semantic analysis); similarly with an adjectival basis, e.g. **roudʰ(h₁)on-* (cf. note 19) > Germ. **rauðan-*, Lat. *Rūfō* (individualizing) vs. **roudʰo-h₃onh₂-* (Hoffmann formation) 'having a red blemish'. HAJNAL reaches the conclusion (p. 46): "Da das germanische schwache Adjektiv keine einheitliche Bildeweise fortsetzt, erweist sich die Erweiterung mittels eines *n*-Suffixes endgültig als sekundäres, einzelsprachliches Mittel der Determination und ist damit für die Suche nach einer allfälligen nominalen Determination im Indogermanischen ohne Belang". However, that does not follow logically: how can the mere fact that the distinction between the two original patterns may have been partially, but secondarily, blurred in Germanic exclude that one of them, the "individualizing *n*-stems", had a specific function of determination in the protolanguage?

stray examples may possibly be adduced from other languages as well. Thus OETTINGER (1997) draws the attention to Skt. *mahā́nt-*, Av. *mazā̆nt-* < IIr. **majahant-* which is analyzed as an *nt*-derivative of the adjective **méĝ(e)h*$_2$*-*,[5] and the Av. (thematicized) *maγnəṇta-* 'naked' ~ *maγna-* 'id.', beside Hittite examples like *pittalwant-* 'schmucklos, entkleidet' from *pittalwa-* 'id.'. Characteristically these adjectives occupy a specialized semantic position: "Die Bedeutungen ... sind dabei meist solche, die sich zur Charakterisierung im Sinne von Spitznamen eignen. Man könnte teilweise von "stigmatisierendem *-ant-*" sprechen" (OETTINGER 1997: 205); cf. also MELCHERT (2000: 70): "It cannot be accidental that a high percentage of these, especially those for which the base adjective is unattested, have a derogatory value: *maklant-* 'thin', *marlant-* 'foolish', *paprant-* 'impure', *duddumiant-* 'deaf', *dudduwarant-* 'lame' *wargant-* 'fat'".

1.2.3. Primary **-nt*-derivatives from a substantival base are at best sparingly attested apart from Anatolian and Tocharian, though OETTINGER (1997: 206, and 2001) adduces **u̯isont-* 'durch Stank charakte-

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[5] Strictly speaking, it is still possible that *mahā́nt-*, *mazā̆nt-* represent an analogical creation after *bṛhánt-*, *bərəzant-* 'high' (thus EWAia III: 337ff). The **nt*-formation of the latter is explained by OETTINGER as an individualizing adjectival derivative based on the root noun **b^{h}r̥ĝ^h-* as attested in Av. *bərəz-*, and a similar explanation is suggested for "*ĝérh$_2$-n̥t-* 'alt, der Alte'" (OETTINGER 1997: 206). In OETTINGER 2001 **ĝerh$_2$-o-nt-* 'old, the old one' is derived from a thematic **ĝerh$_2$-o-* 'old', but since *o*-stem adjectives with anything but *o*-grade in the root are extremely rare, and the stem is apparently only attested in Arm. *cer* (*o*-st.), it may after all be preferable to consider *cer* modeled after the other word for 'old', **seno-* (cf. JAHOWKYAN 1987: 107 and OLSEN 1999: 46), which may in turn owe its peculiar stem formation to the old vṛddhi-derivative **néu̯o-* 'new'. However, as observed by RASMUSSEN (2002: 345), an alternative solution leaps to the eye: we could be dealing with participles of stative verbs, i.e. **b^{h}r̥ĝ^h-h$_1$-ént-* (or analogical **b^{h}r̥ĝ^h-h$_1$-ont-* as in Arm. nom.pl. *barjownkʿ* < **b^{h}r̥ĝ^h(h$_1$)ontes*) 'being high, tall' and perhaps **ĝérh$_2$-h$_1$-ont-* 'being old' (Gk. *γέρων*, Skt. *járant-*). At least the assumption of a ('deverbative') stative of the root **b^{h}erĝ^h-* would seem plausible considering the parallel existence of adjectives in **-u-* and **-ro-*, compositional *i*-stem and *s*-stem neuter, in short what is traditionally called "the Caland system", and **ĝérh$_2$-h$_1$-ont-* could be the participle corresponding to OCS *zьrěti* 'be ripe' (RASMUSSEN l.c.). The ablaut difference between **b^{h}r̥ĝ^h-(h$_1$)-ént-* and **ĝérh$_2$-(h$_1$)-ont-* is connected with the 'Narten' character of the root **ĝerh$_2$-*, cf. EWAia I: 578. A further example of the same category may be the word for 'shining' **h$_2$r̥ĝ-(h$_1$)-ént-* (~ vṛddhi **h$_2$erĝ-n̥t-ó-* (pace OETTINGER) < **-h$_1$-n̥t-ó-* (?) 'silver' (Lat. *argentum*); cf. the discussion in OETTINGER 2001 with further references), also known from an *u*- and a *ro*-stem adjective, a compositional *i*-stem and an *s*-stem neuter.

connection between the two main categories, a point which has quite recently attracted a good deal of attention.[8] The functional similarity between the type of Lat. *rūfus* ⇒ *Rūfō* (**1.1.2.**) and the type of Hitt. *pittalwa-* ⇒ *pittalwant-* speaks for itself, and when it comes to the "deverbal" types, *n*-stem formations like Skt. *tákṣā*, Gk. *τέκτων*, Arm. *hiwsn* 'carpenter' < **tḗk̂þō(n)*, Skt. *rā́jā* 'ruler, king' < **h₃rḗĝō(n)* or Goth. *hana* 'cock', lit. 'singing' or 'the singer' < **kánō(n)*, may reasonably be described as nouns with a quasi-participial meaning.

1.3.1. Though the affinity between the suffixes "*-n-*" and "*-nt-*" in itself would now seem to be a relatively uncontroversial matter, the consequences to be drawn from this state of affairs are still open for debate. In principle we may choose between two types of scenario, one a purely morphological explanation, favoured by MELCHERT (2000: 69) and JOSEPHSON (the present volume), whereby (at least a number of cases of) **-nt-* is a suffix cluster consisting of "individualizing" **-n-* + **-t-* whose exact function is more difficult to define, the other a phonologically based solution, as defended by OETTINGER (2001) and myself (OLSEN 2001), according to which **-n-* and **-nt-* would in reality be two variants of one and the same suffix.

In MELCHERT's concluding statement (p. 70) it is claimed that " ... the underlying **-e/on-* suffix is substantivizing as well as individualizing. The same is true of the extended **-e/ont-*variant. While this presents no problem for its use in forming plurals to neuter nouns, one may question the claim that it also underlies Hittite numerals in *-ant-*[9]

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[8] MELCHERT (2000), OLSEN (2001) and OETTINGER (2001).

[9] As demonstrated by MELCHERT (p. 59f), the function of *-ant-* with numerals in Hittite is that of marking individual units of something uncountable and hence in principle incompatible with a numeral, and we arrive at a distributive function as in the cited example "... *1-anta* ... *1-anta* ... "(As for) woodpiles, one set lies at the feet of the king, and one set (at those) of the queen"". However, MELCHERT draws no etymological conclusions from this observation, restricting himself to a non-committal reference to EICHNER (1992: 36) who has the following comment on the Hittite material: "From the point of view of the history of the language, the suffix *-nt-* is to be taken into consideration; cf. the adjectives *nekumant-* 'naked' ... on the other hand a collective or abstract formation in *-and-* (Greek *-αδ-* < **-n̥-d-*) could be present. In Hittite both types fell together from phonological causes (nom.sg. **-ant-s* and **-and-s* > *-anza*, dat.sg. **-ant-i* and **-and-i* > *-anti*, then confusion in other forms too) and were probably also fused semantically." Now, if we accept a connection with Greek *-άς*, whether exclusively or not, the proto-form is probably not **-n̥d-* but **-n̥t-* which regularly yields Gk. *-άδ-* under the accent, as demonstrated in OLSEN 1989, so it is not even necessary to assume

8) Root nouns (or derivatives of root nouns), typically found at the end of compounds, frequently ending in **-t* following **-i-*, **-u-* or a vocalic sonant, while those ending in a stop may be similarly extended by **-n*, though only post-vocalically, cf. e.g. **-k̂þit-* 'living' (Skt. *-kṣít-*, Gk. *-κτιτ-*), **-g*^{w}*m̥t-* 'going' (Skt. *-gát-*, Gk. πρόβατα) vs. **-i̯ug-* 'yoking' (Ved. *-yuj-*, Lat. *-iug-*, Gk. *-ζυγ-*) or **-sed-on-* 'sitting' (Lat. *-sedō*, OHG *-sezzo*).

9) The passive participle, vacillating between **-to-* and **-no-* (but never **-nto-*); though conclusive evidence is scarce, a number of apparently interited formations may indicate that **-no-* was originally restricted to the position after stops and perhaps some cases of consonantal laryngeal.[11]

10) Finally the possible nominal origin of the 3.sg. ending *-t* of the finite verb is discussed, a matter which needs not concern us further at this point.

1.3.3. While there is thus a good degree of agreement between OETTINGER and myself concerning the selection of relevant material, and the basic conviction that a purely morphological solution is too weakly founded,[12] we still disagree on two important points: OETTINGER's explanation is *purely* phonological, disregarding any possible morphological hints which might be gained from the material, and as a consequence of this standpoint the occurrence of **t*, though described as originally constricted to word final position, is allegedly erratic.

However, there are numerous indications to the effect that the distribution between **n* and **nt* is not quite accidental, even if they do occur in the same derivational types and isolated word pairs. Thus it leaps to the eye that the type of "deverbative" *n*-stems, with matching feminines in **-nih*$_2$, while functionally close to the *nt*-participles, is typically met with in lexicalized substantivizations, in particular designations of persons (**ték̂þō(n)*, **-nih*$_2$; **h*$_3$*rḗĝō(n)*, **-nih*$_2$; **kan-ō(n)*). As for **-u̯e/on-* vs. **-u̯e/ont-* and **-me/on-* vs. **-me/ont-*, the *n-*

[11] Cf. e.g. for IE **-nó-*: **(h)i̯aĝnó-* > Gk. ἁγνός 'holy', Ved. *yajña-*, Av. *yasna-* 'sacrifice'; **u̯riknó-* > Gk. ῥικνός 'twisted', MHG *ric* 'neck'; **pl̥h*$_1$*nó-* 'full' > Ved. *pūrṇá-*, Lith. *pìlnas* etc.

[12] If **-t-* were a suffix in its own right, added to a primary **-n-* in the 'individualizing' adjectives, it would be hard to understand its role in **-m(e)n-t-* (neutral verbal nouns, esp. nomina rei actae) and in particular in isolated lexemes such as the word for 'dog'.

stems are usually used about exclusively personal subjects, thus Ved. *ṛtā́van-* 'true', *maghā́van-* 'generous', whereas the *nt*-variant belongs with normal, gender-inflected adjectives, e.g. Skt. *cakrā́vant-* ~ Gk. κυκλόεις.[13] In apparent accordance with this state of affairs, the thematic *-*mn̥to*-derivatives are based on *neuter* *-*mn̥(t)*-stems, and likewise the "count plurals" described by MELCHERT (2000) represent older neuter plurals/collectives. If we further include the examples of *ḱu̯ōn 'dog' vs. *ḱunto-[14] and *h$_1$en 'in' vs. *h$_1$entero-, the rough outlines of an original complementary distribution of *nt/n/t/Ø* seems to materialize. With slight elaborations on OLSEN 2001, I tentatively suggest the following system (R = sonant and vocalic laryngeal; C = stop and consonantal laryngeal):

Before word-final *-*s*:	/-CV̆nts/	>	/-CV̄(n)/	(1)
Word-final position:	/-CV̆nt/	>	/-CV̆n/	(2)
	/-CRnt/	>	/-CR̥t/	(3) and
	/-Cmnt/	>	/-Cmn̥t/	(4) (?)
	/-Cnt/	>	/-C(n̥t)/	(5) (?)
Internal position:	/-CntV-/	>	/-CnV-/	(6)
	/-CRntV-/	>	/-CRtV-/	(7)
	/-CVntV-/	>	/-CVntV-/	(8)
	/-CntC-/	>	/-Cn̥tC-/	(9)

Examples:

(1): nom.sg.masc. *-*ē(n)*/*-*ō(n)*; *-*u̯ō(n)*; *-*mē(n)*/*-*mō(n)*; *ḱu̯ō(n) 'dog'

(2): loc.sg. *-*en* (Skt. *heman* 'in winter'); voc. *-*en*/*-*on*; prep. *h$_1$en

(3): extended root nouns like *-*k^{w}r̥-t*, *-*g^{w}m̥-t*, *-*ḱþi-t*, *-*stu-t*, *-*stə$_2$-t* vs.

(4): nom.acc.sg.neut. *-*mn̥t* (?)

[13] This is a descriptive fact in Skt., cf. WD II.2: 900.

[14] This reconstruction is preferable to *ḱu̯n̥-to- as it combines the evidence of Germanic and Baltic.

(5): "unextended" root nouns like **-u̯id* vs. neut.nom.acc.sg. **-Cn̥t* (?)[15]

(6): ptc. **i̯aĝnó-*, **u̯riknó-*, **pl̥h₁nó-*; fem. **h₃rḗĝnih₂*, **tek̂pnih₂*; prev. **h₁ni-* 'in' (~ prep. **h₁en*)[16]

(7): ptc. **kʷr̥tó-*, **stə₂tó-* etc.

(8): acc.sg.masc. **-e/ontm̥*; nom.pl.masc. **-e/ontes*; neut.pl.nom. acc. **-e/ont(a)h₂*; **h₁entero-* 'inner'; **k̂unto-* 'dog'

The unexpected vocalization pattern (cf. especially (6)) seems to point to *nt* as a unit rather than two separate phonemes, an observation which is in good accordance with the particular status of the participial **-e/ont-* where *-n-* and *-t-* are never separated, which is a quite unique situation with two-consonant suffixes.[17] Let us for now concentrate on the variation of the basic *n(t)*-suffix, since the passive participles of (6) and (7) are part of a more far-reaching discussion which is immaterial to the present analysis.

1.3.4. A explanation along the lines suggested above would account for the high frequency of *n*-stem forms in connection with masculines in general and masculine substantivizations of original adjectives in particular. Thus the reconstruction of a proto-typical *nt*-stem paradigm would have approximately the following shape:

masc.nom.sg.	*-C-ont-s	>	*-C-ō(n)
masc.voc.sg.	*-C-ont	>	*-C-on

[15] The regular reflex of **nt* in (3), (4) and (5) is debatable. Due to the particular accentual circumstances, the development after root nouns as final members of compounds (cf. **1.3.6.**) is not necessarily normative for independent, fully accented derivatives such as the neut.sg. of the "active participle" where Skt. *-at* (cf. also *-mat* and *-vat* from adjectival **-men(t)-* and **-u̯en(t)*-stems) points to **-n̥t*. The situation of the neuter substantival **-m(e)n(t)*-stems is difficult to evaluate if the nom.acc.sg. is a substitution for **-mr̥(t)*.

[16] To be distinguished from **ni-* 'down, under', cf. especially for the semantics **ni-ti̯o-* 'insider' in Skt. *nítya-*, Goth. *niþjis* (EWAia II: 43).

[17] Thus there may be some basis for the assumption of an original monophonemic prenasalized entity **-nt-*, as originally somewhat impressionistically suggested by MARTINET (1986: 169-173), to solve some of the problems in question.

1.3.5. Summing up the information gained on the basic suffix **-nt-*, we may conclude that, **nt* and **n* being originally conditioned variants, the distinction between *nt*-stems and *n*-stems is due to a secondary split; the same would go for **-u̯e/on-* vs. **-u̯e/ont-* and **-me/on-* vs. **-me/ont-*. The semantic continuum, as described for Hittite by JOSEPHSON (this volume), may roughly be defined in terms of individualization, specification, singularization/decollectivization (e.g. *Brown, the brown (one), a brown one*), which seems adequate for at least the denominal subgroups **1.1.2.**, **1.2.2.**, **1.2.3.** and, if this is in effect etymologically the same suffix, **1.1.3.** In principle these denominal derivatives are adjectives, but they may be, and are indeed frequently, substantivized.

At first sight the types **1.1.1.** and **1.2.1.** are somewhat aberrant, displaying a participial or quasi-participial meaning and frequently derived from verbal stems, so that an agentive function is a marked characteristic of this group. Consequently there is no general agreement to accept a common source for the "denominal" and the "deverbal" *nt*-stems.[20] Thus this point may need some further discussion.

1.3.6. If it is true, as assumed by OETTINGER and myself, though with somewhat different reasoning, that the *-t* added to root nouns as final members of compounds is somehow connected with the *t* of *n(t)*-stems, this may be the missing link to a better understanding of the relation between "denominal" and "deverbal" or "participial" *n(t)*-stems: As is well known, it is a descriptive fact, most abundantly attested in Indo-Iranian but surely valid for PIE as well, that this *-t* is only found in certain phonological contexts, viz. after a vocalic sonant or laryngeal, while we appear to find the bare root noun with other root structures. Supposing the element *-t* had a function which would distinguish a *t*-extended form from a root noun pure and simple, it would be the logical conclusion that it was in principle possible to express this function with all roots, not just those which accidentally ended in something convenient, i.e. we have to posit some entity which yielded either *-t* or zero according to the root structure. As for the possible function,

[20] The idea that the "individualizing" *n*-stems and the "participial" *nt*-stems are ultimately historically identical is defended by OETTINGER 2001 and OLSEN 2001: 71. MELCHERT (2000, note 20) argues that "the well-established use of **-e/ont-* as a verbal adjective in Anatolian was inherited in this function and with this fixed shape, already distinct in PIE from individualizing **-e/on-* and its extended form **-e/ont-*". This may be basically correct, but of course even PIE has a long history behind it.

it is easily recognized that while simplex root nouns may be both agent nouns and action nouns, active and passive,[21] the great majority of those seen at the end of compounds are agent nouns (mostly, but certainly not always, active), so that the verbal noun at the end of a compound will typically have the function of a verbal *adjective*, or in other words a (mostly active) participle, e.g. Ved. *soma-sú-t-* 'pressing soma'. Though the addition of *-t* to verbal nouns in *-i*, *-u* and *-ṛ* is obligatory in Skt. and may thus have been subject to analogy, it is still remarkable that this *-t* is *only* added to those root nouns which are identical with a verbal root: *su-drú-* 'made of good wood' is acceptable, **soma-sú-* is not. Why this idiosyncratic behaviour if *-t* was merely, as suggested by OETTINGER, an "unorganic" element designed to close the final syllable?

Now we already have an active participle as a simplex, viz. the **-n(t)*-formation of e.g. **bʰéront-*, which conspicuously does not occur in Vedic at the end of governing compounds with a nominal first member:[22] *soma-sú-t-* is abundantly attested, **soma-sunvant-* does not exist, i.e. there is complementary distribution between **-n(t)-* in simplicia and *-t-/-Ø-* in compounds whose final members regularly occur in the zero grade. Such is the synchronic state of affairs of Vedic, and one would assume of the proto-language as well. Evidently the phonological context is not the same for simplicia such as **bʰér-ont-* or **bʰéu̯g-ont-* as it is for synonymous compound finals like **-bʰr̥-t-* or **-bʰug-*. The simplicia are independent, fully accented words, while "root nouns" at the end of compounds as parts of larger units have considerably less body; as they almost consistently exhibit an unalterable zero grade, it must be assumed that the accent of such compounds originally fell on the initial member,[23] and that a secondary suffix following the final member cannot have carried much weight. The functional similarity between the *nt*-participles and the majority of "root nouns" (including *t*-stems) at the end of compounds and the remarkable gap in the system may seem to favour a historical connection between the two types as well. In both cases the supplementary suffix

[21] SCHINDLER 1972 and 1972a.

[22] WD II.1: 87: "Als Hinterglieder nominaler Komposita können im ganzen alle Nomina verwendet werden. Doch erscheinen manche Nomina verbalia, *insbesondere die Partizipien*, wenn in eigentlicher Bedeutung gebraucht, nur hinter den Indeklinabilia, mit denen die zu Grunde liegenden Verba verbunden sein können".

[23] Cf. the discussion in OLSEN 2001 and 2002.

added to the root noun may have defined it as a (verbal) adjective, usually of a personal or specific character, i.e. the meaning would be fully compatible with that of the more obviously denominal types of *n(t)*-stems.

We do not *know* which shape the basic suffix **-nt-* would assume after an unaccented, zero-grade root at the end of a compound, but *if* we accept a development to *-t* after vocalic sonants and laryngeals, zero after stops, that is exactly what we find.[24]

2. The "Hoffmann suffix" *-$h_3$on(h_2)-

2.0. Another basic type of *n*-stems is characterized by the so-called "Hoffmann suffix", containing (at least) a laryngeal + *n*. HOFFMANN himself (1955) described the suffix as having a possessive function on the basis of such cases as Av. *mąθrān-* 'Spruchkenner' from *mąθra-* 'Spruch', or Skt. *yúvān-*, gen. *yū́naḥ* 'a youth' from **$h_2$ói̯u-*, Skt. *ā́yu-* 'life, lifetime'. With an analysis of Welsh *afon* 'river' < **$h_2$ap-$h_3$on-* from **$h_2$ap-* 'water', HAMP (1972) specified the quality of the laryngeal as **-h_3-*, triggering voicing of the preceding **-p-* to **-b-*. As other classical examples of the "Hoffmann suffix" we can mention Av. *puϑrān-* (< **putlo-$h_3$on-*) 'having sons', *hāuuanān-* 'the title of a priest; einer der das Mörsergerät hat', *vīsān-* (**u̯ik̂o-$h_3$on-*) 'der Hauswesen hat', and possibly the gen.pl. *hazasnām* (**seĝʰos-h_3n-*) 'one who has booty', i.e. 'robber'.[25]

2.1. In later applications and elaborations of Hoffmann's thoughts various specific details, including the nature of the laryngeal (**h_1*, as assumed by Hoffmann himself, or **h_3*) and the role of Hoffmann-formations in secondary derivations, have occasionally been discussed, the latest contribution being PINAULT's thorough and thought-provoking treatment (2000).

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[24] When root nouns in the function of agent nouns are genuine, independent substantives they are apparently not characterized by the *nt*-suffix, thus e.g. **bʰṓr* (Gk. φώρ, Lat. *fūr* 'thief').

[25] I cannot follow HAJNAL (1997: 46) in accepting the Skt. possessive *-ín-*, e.g. *putrín-* 'having sons', as a continuation of the "Hoffmann suffix" (i.e. **-h_3n-*): **-$ə_3$n-* makes no sense with the typically thematic base words, and the accent differs from that of *yúvān-*.

cognates (cf. *charge* < Lat. *carricāre* 'load a wagon', German *einem etwas zur last legen* 'charge someone with something', and conversely Lat. *exonerāre*). A further possibility for attachment is the Homeric ... medium tantum verb *ὄνομαι* 'impugn, quarrel with' ... Perhaps the gemination in *hann-* (and the concomitant absence of plene vowel spellings) is an index of *-nH_2-". Since Lat. *onus* is only morphologically regular under the assumption of a root initial *h_3- (*s*-st. *$h_3$énhos), an etymological connection between *onus* and Hitt. *hanna-*, Gk. *ὄνο-/ὤνα-* would necessitate a reconstruction of the IE root as *$h_3$onh-, preferably *h_3onh_2-. It is remarkable that the Hittite verb is originally an intransitive stative[37] (*'be in charge'?), only secondarily and by way of back formation used in a transitive sense.[38]

The proposed reconstruction does not preclude a relation with *anniya-* < *h_3(o)nh_2i̯e/o- in so far as the justification for an assimilatory change of *h_3- → *h_2- could have been eliminated by the expected loss of laryngeal before yod by the WACKERNAGEL-PINAULT rule.[39]

As for Gk. *ὀνοστός*, allegedly a verbal adjective in *-*tó*- with analogical -*σ*-,[40] a relation to *onus* paves the way for a new morphological analysis: we may simply be dealing with an exact comparandum of Lat. *onustus* 'loaded, burdened' < *$h_3onh_2$os-to-.[41]

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[37] OETTINGER 1976: 122f.

[38] Cf. also the parallel adduced by PUHVEL (HED III: 83): " ... Old Irish *brith* was literally 'a bearing' (incl. childbearing), thus a 'charge' which was 'brought' (*berid brith*), but a verdict was likewise 'brought' (*berid mess*), and hence *berid brith* has also come to signify 'pass judgment'".

[39] PUHVEL's analysis is supported by MELCHERT (1994: 51: "*h_3énh_2o-") and KIMBALL (1999: 416, same reconstruction). It is difficult to decide if the Anatolian material reflects *h_3onh_2- directly as long as the Lycian evidence is so scarce, and the regular development of initial *h_3 in Hittite may still be erratic, so that both *an-* and *han-* might reflect *h_3-. In HACKSTEIN's interpretation (1995: 65f), including Toch. B. /nak-/, A. *nāk-* 'tadeln, schmähen', the root is reconstructed as *$h_{2/3}neh_3$-, and the Gk. -*α*-forms are explained as analogical after e.g. *ἄγαμαι*, *ἔραμαι*. While one may find an analogical explanation with distant assimilation or partial adaptation to the thematic verbs more convincing for the usual *o*-forms, this detail is immaterial to the further discussion. The important thing is the initial *h_3-.

[40] SCHWYZER GG: 503. An obvious analogical pattern is missing.

[41] Cf. Il.9.164: *δῶρα μὲν οὐκέτ' ὀνοστὰ διδοῖς Ἀχιλῆϊ ἄνακτι* 'you would not give blameworthy gifts (or perhaps better 'gifts that have a blemish on them') to the lord Achilles'. Lat. *onustus* is used in both a positive and a negative sense, e.g. one may be *onustus* 'with age' or 'with sacrilege'.

2.2.6. Finally Gk. ὄνομαι has been more or less wholeheartedly connected with two Celtic nouns,[42] OIr. *on* (neut., probably an old *s*-stem) "A blemish or disfigurement; in early sagas used of a blister (?) raised by a poet's satire on the face of his victim, and hence fig. a blot or stain on one's reputation, a social disgrace or disqualification" (*RIADict* N-O-P: 143) and *a(i)nim* 'blemish, defect'.

2.2.7. Thus the possible derivatives of an IE root *h_3onh_2- 'load, charge' (also figuratively) may be summarized as follows: Root present (middle) in Gk. ὄνομαι 'charge, blame'; perhaps *i̯*-present in Hitt. *anniya-* 'fulfill, deal with a charge', *appa/arha anniya-* 'discharge'; stative in Hitt. *hanna-* 'be in charge with respect to sby. (dat.)' → 'charge, sue etc.', and perhaps Arm. *ownim* 'have, govern, be in charge of'; *s*-stem in Lat. *onus* 'load, charge', Skt. *ánas-* 'cart', perhaps OIr. *on* 'blemish'; corresponding derivative in *-*os-to-* in Lat. *onustus* 'loaded', Gk. ὀνοστός 'having a blemish' (?); and finally compositional root noun *-h_3onh_2- in the "Hoffmann suffix".

2.3. Let us now try to reconsider the types **2.1.2.1.** and **2.1.2.2.** under the assumption that we are indeed dealing with compounds, not derivatives: as the nouns of the first group are basically adjectives they can reasonably be described as bahuvrīhis, which is supported by the initial accent of *yúvān-*, but since bahuvrīhis by definition imply the idea of possession or at least appurtenance in connection with the initial member of the compound, the semantic contents of the final member must be included in a fuller understanding, and here an approximate meaning 'load, burden, charge' with the further connotations 'duty, responsibility' and 'blemish' (cf. OIr. *on*, Gk. ὄνομαι) seems to fit very well.

2.3.1. Thus we arrive at the following semantic analysis of the first subgroup, the (substantivized) adjectives:

*h_2*iú*-$h_3$onh$_2$- 'having a lot of vital force'
*mlít-h_3onh_2- 'having a load of honey, loaded with honey'
*ali-h_3onh_2- 'loaded with fine wool'
*séĝʰos-h_3onh_2- 'having a load of booty'
*méntlo-h_3onh_2- 'having charge, i.e. being in charge of the mantras'

[42] E.g. IEW 779.

putlo-$h_3$onh$_3$- 'in charge of sons'
ui̯ko-$h_3$onh$_2$- 'in charge of a household'

and in the case of the pejoratives:

Gk. γνάθων, γάστρων, Lat. *Nāsō* 'burdened with, having a blemish of a (conspicuous) jaw, belly, nose' etc.

2.3.2. The genuine substantives, on the other hand, are either collectives, denoting a load or a mass of something (*$h_2$ap-$h_3$ónh$_2$-* 'body of water', Gk. γαιών 'heap of earth', μυών 'bundle of muscles', Hitt. *muriyan-* 'cluster of grapes' etc.), or they designate the place containing such a collective, especially in Greek (θυρών 'place with a lot of doors', ἱππών 'place with a lot of horses' etc.; cf. also the differing meanings of Lat. *onus* vs. Ved. *ánas-* 'cart' (that which holds a load)).

2.3.3. As the opposition between the adjectives and the substantives coincides with a difference of accent, it seems natural to assume a case of word class change by contrast accent (internal derivation), whether on the pattern of other compounds or simplex nouns. Thus the original adjectives seem to reflect one of the numerous cases of grammaticalization of an earlier compositional member where the semantic shade of possession or appurtenance is simply an inherent characteristic of any possessive compound.

No doubt the adjectival type represents the most ancient layer, constituting the basis for the substantives, and not the other way round, but still the concordant evidence of Anatolian, Greek, Armenian and Celtic must be enough to establish the inherited character of the substantival type as well. Perhaps it is even possible to point to an isolated example of internal derivation, exhibiting the correct accent pattern, which may go back to the proto-language:

$h_2$ói̯u- (Ved. *ā́yu-* 'vital force' (base word) ⇒ *h_2i̯ú-$h_3$onh$_2$-* (Ved. *yúvān-* 'young') 'having a lot of vital force' (possessive compound, adjective, initial stress) ⇒ *h_2i̯u-$h_3$ónh$_2$-* (Gk. αἰών, -ῶνος

'life time, long span of time'[43]) 'a lot of vital force' (governing compound, substantive, end stress).

If the preliminaries sketched above are accepted, the formal and semantic analysis of a whole complex of compounds with different types of first members, including a multitude of secondary derivatives, suddenly runs quite smoothly. This is not the place for a detailed discussion, but at least a few examples illustrating the derivational processes may be pointed out.

2.4. Verbal nouns in *-i-h_3onh_2-*, *-i-$h_3n̥h_2$-os* (Lat. *-iō*, *-iōnis*; Germanic *-īn-* and *-jōn*-stems; Arm. *-iwn*; cf. OLSEN 1999: 487) are often specifically characterized by a more concrete meaning than simple verbal abstracts, e.g. Latin *legiō* 'a legion' denotes not 'the act of selecting', but 'a group of people who have been selected', and Goth. *sakjo* 'quarrel' is a collective 'load of utterances', *garunjo* 'a flood', *gatimrjo* 'a building' etc.[44] The same suffix cluster is seen in extended compounds like Lat. *commūniō*, Goth. *gamainei* 'a gathering'. Here we have the substantival (end-stressed) variant of the "Hoffmann" compound.

[43] A direct derivation of the *n*-stem *αἰών* from *$h_2$ói̯u-* was assumed by SCHINDLER (1975: 63; cf. also PETERS 1980: 76f), comparing the secondary *n*-stem with that of *g^wr̥h_2ú-* 'heavy' ⇒ *g^wréh_2u̯-on-* 'grindstone' and Ved. *r̥bhú-* 'skilfull' ⇒ *ŕ̥bhvan-* 'id.'. The meaning of the secondary suffix is tentatively described as "individualisierend (substantivierend, personifizierend)". This seems to be a precise description of *g^wréh_2u̯-on-* ('the/a heavy one') and *ŕ̥bhvan-*, and in fact the clue to the suffix *-u̯e/on(t)-* may very well be a clustering of (mostly adjectival) *-u-* + "individualizing" *-n(t)-* (cf. section **1.**), but the analysis is inadequate for Gk. *αἰών*: the meaning is not particulary fitting, and the final accent is aberrant. If PETERS is right in assuming a regular development *hi- > i̯- in Greek, *αἰών* would seem to have an analogically introduced full grade in the root (i.e. *$h_2$ai̯u-$h_3$ónh$_2$-* for expected *h_2i̯u-$h_3$ónh$_2$-*), but the scarcity of "regular" examples as opposed to the considerable amount of "analogical full grades" is somewhat disquieting, so perhaps this problem still awaits its final solution.

[44] PIMENOVA (this volume) has an interesting point about the semantic relation between a number of Germanic *-īn*-stems with parallel *-ja*-stems: while the *-īn*-stems designate a characteristic of a specific *subject*, the *-ja*-stems describe the characteristic phenomenon as such: *barniskei* (*īn*) is 'childishness, being childish', *barniski* (*ja*) 'childhood'; *lausawaurdei* (*īn*) is 'chattiness', *lausawaurdi* (*ja*) 'loose words'. This observation fits an interpretation of *-h_3onh_2-* as something onerous and tiresome as is also seen in the words for diseases and unhealthy conditions in *-gon-* and *-don-*.

2.5. Similarly the suffix cluster **-ti-h₃onh₂-* (Lat. *-tiō*, *-tiōnis*; Umbr. *-tin-*; Goth. *-þjō*; OIr. *-tiu*, *-tin*; Arm. *-(ow)tʿiwn*; cf. OLSEN 1992: 142f, 1994a: 346 and 1999: 546ff) frequently has a concrete meaning, as in Lat. *ratiō* 'a reckoning', Goth. *raþjō*, or Lat. *nātiō* 'breed, species, race', i.e. 'a load, group of individuals that have been born' as opposed to the basic abstract *ti*-stem which would simply mean 'birth'.

2.6. Substantives in **-gon-* < **-k-h₃onh₂-* (cf. OLSEN 1994a and 1999: 591f for extra-Italic evidence) are especially prolific in Latin, in particular in the sequences *-āgō*, *-īgō*, *-ūgō* with a clear connection to stems in **-k-* and **-ko-*, cf. e.g. *appendix*: *pendīgō* 'internal tumour, abscess'; *aerūcus* 'verdigris': *aerūgō* 'rust, verdigris'.[45] Many of these nouns, notably in *-īgō* and *-ūgō*, denote blemishes, physical defects, diseases (especially skin diseases) etc. (cf. LLF 368f), and keeping in mind OIr. *on* 'blemish', the use of Lat. *onus* about physical encumbrances and the Gk. verb ὄνομαι, the original core was probably constituted by substantival compounds indicating the blemish defined by the first member. The function of **-k-* (when it is not a reminiscence of the root **-h₃k̑ʷ-* as e.g. in **rou̯dʰo-* 'red' ⇒ *rou̯dʰi-h₃k̑ʷo-* 'of red appearance, reddish' ⇒ **rou̯dʰi-h₃k̑ʷo-h₃ónh₂-* > 'a reddish blemish, rust') rather seems to be that of a collective marker.[46]

[45] The material is collected and discussed in ERNOUT 1946.

[46] Cf. PINAULT (2000: 65) on *virāgō* 'manly woman': "... dérivé d'un collectif en **-H₂-* élargi par **-k-*". I agree with PINAULT l.c. that my original suggestion concerning the semantics of *rōbīgō* (abstract noun "the having of redness, being affected with redness") is unsatisfactory, but on the other hand the suggested alternative implying personification or divinisation of various diseases and blemishes is rather arbitrary: "*rōbīgō* "rouille" (des plantes), divinisé comme la puissance "pourvue de rougissement"". It does seem plausible, as argued by PINAULT, that an example like Lat. *virāgō* is best understood as a substantivized adjective (in my version a bahuvrīhi): **u̯irah₂-k-h₃onh₂-* 'someone charged with male qualities', but as we have seen, the capacity of creating both exocentric, primarily adjectival, formations and endocentric genuine substantives must be attributed to the protolanguage, so there is no particular reason to insist on a perfectly homogenous explanation for *all* stems in **-gon-*. PINAULT does not explain the function or origin of the element **-k-* which is allegedly added to the collective base words /first members of compounds, but apparently it adds nothing to the expected meaning, which is in itself problematic, and furthermore there seems to be no examples of a suffix conglomerate **-h₂-k-* apart from the cluster **-gon-*. Some connection between stems in **-k-* (whence **-ko-*) and **-gon-* is undisputed, whatever the reason may be, and in principle we may expect laryngeal "hardening" (cf. MARTI-

2.7. The complex formations in Greek and Latin *-*don*- (cf. CHANTRAINE 1933: 361 and LLF 367) have already been analyzed in OLSEN 1994: 275 and 1994a as original *s/t*-stems extended by the "Hoffmann suffix". The specific relation to *s*-stems and stative verbs is obvious, cf. such examples as Gk. ῥῖγος, Lat. *frīgor* ~ Lat. *frīgēdō*; Gk. ἔρευθος, Lat. *rubor* ~ Lat. *rubēdō*; Gk. ἄλγος ~ ἀλγηδών, and the semantic shade of the *n*-stems is typically that of unhealthy physical or mental conditions, e.g. *frīgēdō* is not 'cold' in general, but rather 'sensation of coldness'. Again a proto-typical compound in *-h_3*onh*$_2$- 'charge, blemish' neatly accounts for the derivatives, thus *frīgor* 'cold' ⇒ *frīgēdō* 'charge, burden, encumbrance of cold'.[47]

NET 1955) before a nominative ending *-*s*. However, true collectives in *-h_2 have no nominative ending, although it is possible to individualize or personify an original collective by the addition of *-*s* in the nom.sg., e.g. **séno*- 'old' ⇒ **sénah*$_2$ 'collective of old people; old age' ⇒ **sénah*$_2$*-s* > Lat. *senex* 'an old individual'. Now, to take Pinault's example, a *virāgō* is someone charged with male qualities (collective), not with a male individual, so in order to explain the *-*k*- we would either have to assume analogical influence from a corresponding 'singulative' in *-h_2-*s* > *-*k-s* or, what is at least morphologically simpler, postulate a regular development of *-h_2-h_3- > *-*g*- which seems phonetically plausible and without counterexamples. As for the particular case of *virāgō*, however, we are presumably dealing with a secondary restitution, semantically influenced by *vir* 'man': the original meaning of **u̯ih*$_1$*ró*- seems to be something like 'youthful and vigorous' (cf. Toch.A. *wir*) ⇒ collective **u̯ih*$_2$*rah*$_2$- 'youth, vigour', and the corresponding "Hoffmann" compound **u̯ih*$_1$*rah*$_2$-*h*$_3$*onh*$_2$- 'someone loaded with youth, vigour' may well be reflected in Lat. *virgō* < **u̯irăgō* with a probably regular short *-*ă*-. In that case *virgō* would belong to the same semantic group of old bahuvrīhis as Ved. *yúvān*-.

[47] The typical "Ausgang" -*ēdō(n)* in both Greek and Latin is probably due to analogical influence from the corresponding stative verbs, but the expected *-*et*-*h*$_3$*onh*$_2$- (where *-*et*- would reflect the *t*-alternant of an *s/t*-stem as a first member of compounds, a position where "*s*-stems" are prohibited) is probably what we have in Gk. τηκεδών 'melting away, consumption', φαγέδαινα 'cancer' etc. According to PINAULT "il existe des arguments suffisants pour accepter un suffixe complexe *-*de/on*-, avec des formes thématisées, et indépendant de toute formation en *-*t*-", but as far as what appears to be the only alternative explanation goes, viz. that offered by MEISER (1993), I am far from convinced. Starting from stems in *-*don*-, the origin of which remains unexplained, MEISER ventures a new interpretation of the Latin gerundial formations, but what we really need to understand, viz. why the *-*don*-formations are so intimately connected with "*s*-stems" and stative verbs, is left in the dark. The question of "-*don*-stems" and their secondary derivatives will be treated in more detail elsewhere.

2.8. By thematicizations of *n*-stem compounds we arrive at derivatives with the expected meaning 'something or someone having or being connected with one who has the *-h$_3$onh$_2$-, i.e. load, charge or authority, expressed by the first member', although it sometimes occurs that the thematicization is semantically empty, as in *pə$_2$tro-h$_3$onh$_2$- ⇒ *pə$_2$tro-h$_3$n̥h$_2$o- > Lat. *patrōnus* 'someone with paternal authority' (cf. Suetonius' *patria onera* 'paternal duties').[48] It is further important to realize that the addition of a thematic vowel does not automatically express possession, but merely some kind of appurtenance, sometimes used for the derivation of adjectives from substantives, sometimes the other way round. Thus derivatives based on bahuvrīhi compounds would most naturally result in substantives.[49]

E.g. *suh$_1$i̯ú- 'son' ⇒ *suh$_1$i̯ú-h$_3$onh$_2$- 'having the authority of the son, exercised by the son' ⇒ *suh$_1$i̯u-h$_3$n̥h$_2$-ó- 'one under the authority of the son, a grandson', Gk. *υἱωνός*.[50]

*di̯ḗu̯s 'Heaven; Zeus' ⇒ *diu̯ó-h$_3$onh$_2$- 'having heavenly authority, or the authority of Zeus' ⇒ *diu̯o-h$_3$n̥h$_2$-áh$_2$ 'someone (f.) under the authority of Zeus', Gk. *Διώνη* 'lover of Zeus, mother of Aphrodite'.[51]

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[48] The thematicization of formations like Lat. *patrōnus* and *colōnus* 'someone in charge of a plot of land' (*k^{w}elh$_1$o- or *k^{w}olh$_1$o- ⇒ *k^{w}e/olh$_1$o-h$_3$onh$_2$- → *k^{w}e/olh$_1$o-h$_3$n̥h$_2$o- should be explained by analogical influence from the more archaic type of feminines in *-h$_3$n̥h$_2$ah$_2$ (or *-h$_3$n̥h$_2$ih$_2$), originally of goddesses under the authority of a specific god (Gk. *Διώνη*, the one under the authority of Zeus), then about goddesses or females excercising authority themselves (e.g. Lat. *Pomōna* 'the mistress of the tree-fruit'), and finally about ruling males (e.g. Lat. *patrōnus*).

[49] Cf. RIX 1989: 226: "*-h$_3$n̥- leitet ein Adjektiv ab, -*o*- substantiviert dieses". As correctly pointed out by PINAULT (2000: 94), there is a close structural parallel between *-h$_3$on(h)- ⇒ *-h$_3$n̥(h)ó- and compounds in *-h$_3$ok^w- with thematicizations in *-h$_3$k^{w}o-.

[50] For the basic reconstruction and phonetic understanding of Gk. *υἱωνός*, *οἰωνός* I refer to RASMUSSEN 1999 [1990/91].

[51] It is theoretically possible that the corresponding bahuvrīhi compound is indirectly attested in Lat. *Iūnō*: A paradigm *di̯ú-h$_3$onh$_2$-/*di̯ú-h$_3$n̥h$_2$- would probably be regularly realized as *iuvō, *iūnis, normalized to *Iūnō*, *Iūnōnis* 'the one (f.) having heavenly authority', which is exactly what Iūnō, Juppiter's spouse, has. However, the traditional etymological linking of *Iūnō* with *iuvenis*, *iūnior* (e.g. ERNOUT-MEILLET 329) is equally possible (*h$_2$i̯ú-h$_3$onh$_2$-/*h$_2$i̯u-h$_3$n̥h$_2$- 'the young one' (~ Skt. *yúvān*-), also yielding *iuvō, *iūnis → *Iūno*, -*ōnis*; cf. RIX's reconstruction (1981: 108): *h$_2$i̯éu̯-h$_3$ō, *h$_2$i̯u-h$_2$n-és with fem. *h$_2$i̯éu̯-h$_2$n-ih$_2$). In any case the original weak stem is attested in the adjectival *io*-derivative *iūn-ius*

**snoigʷʰi-h₃onh₂-* 'having a lot of snow' etc. The addition of the thematic vowel, **-i-h₃onh₂-* ⇒ **-i-h₃nh₂o-* leads to a change of word class, exactly like the 'internal derivation' in ἱππών etc.

Collective nouns denoting a characteristic feature of an animal, like the meat or skin, e.g. Lat. *ferīna*, OS *zvěrina* 'venison', OSl. *ovьcina*, Arm. *ayceni* (*-eni* < **-i-h₃nh₂-iah₂*) 'pertaining to the animal that has a load, charge of X'. Here the basic type of bahuvrīhi is attested in Hitt. *aliyan-* 'having a load of fine wool', i.e. 'sheep'.

Thematicized possessive compounds, characteristically often including a numeral, e.g. Skt. *pañca-janīna-* 'of five families', *tri-rātrīna-* 'lasting three nights', Arm. *hing-amean* 'lasting five years'.

2.9. In conclusion, HOFFMANN's original analysis is undoubtedly a major step forward in our understanding of an important part of Indo-European word formation, and it can hardly be doubted that he was basically right in focusing on the adjectives rather than the secondary substantives and in stressing the possessive meaning of these adjectives. However, the semantic characteristic of possessivity is simply due to the foundation of the type as grammaticalized bahuvrīhi compounds, and, if this is not an unforgivable flippancy, it may be argued that *originally* the Hoffmann "Possessivsuffix" was strictly speaking neither possessive nor even a suffix. Only by accepting this preliminary do we fully understand the distinction between the basic exocentric (adjectival) type and the contrast formation of endocentric substantives, and the flourishing variation of secondary derivatives which remained a vivid and productive feature of the separate branches of the Indo-European family for so long.

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Nominale Stammbildungssuffixe als Derivationsmittel im (Gemein)germanischen[1]

NATALIA PIMENOVA

I. Bekanntlich können nominale Suffixe in den altgermanischen - wie auch in anderen älteren indoeuropäischen Sprachen - in Stammbildungssuffixe und Wortbildungssuffixe (echte Wortbildungssuffixe) eingeteilt werden. Stammbildungssuffixe gelten als die in synchroner Sicht weitgehend entsemantisierten lexikalisch-grammatischen Formantien, die die Zugehörigkeit eines Nomens zu einer Flexionsklasse bestimmen. Zu den altgermanischen Stammbildungssuffixen von Substantiven zählen *a-* (Maskulina, Neutra), *-ō-* (Feminina), *-i-* (Maskulina, Feminina), *-n-* (Maskulina, Feminina, Neutra; schwache Deklination), *-u-* (Maskulina), *-r-* der Wurzeldeklination (sowie *-s-* der *-es-/-os-*Stämme und *-nt*). Die besonders frequenten Stammbildungssuffixe sind darüber hinaus in Formen mit Erweiterungen bezeugt; vgl. *-ja-*, *-jō-*, *-jan-*, *-jōn-* u.ä.m.

Stammbildungssuffixe stehen echten Wortbildungssuffixen gegenüber, z.B. germ. *-ī(n)*, *-iþa*, westgerm. *-nissa* u.a.

In formeller Hinsicht schließen altgermanische Wortbildungssuffixe ein Stammbildungssuffix ein. Vgl.: *-ī(n)* = *ī* + *n* (*-n-* bestimmt die schwache Deklination der mit *-ī(n)* gebildeten Wörter); *-iþa* = *iþ* + *ō*. Die formelle Komplexität vom germanischen *-iþa* zeigt sich noch im Vorkommen von *-iþ-* mit anderen Stammbildungssuffixen. Vgl. im Gotischen *-iþ* in *fulliþ* "Fülle", das dem ahd. *fullida* "Fülle, Erfüllung" (*ō*-Stamm) entspricht, aber den *-a-/-i-*Stamm[2] aufweist; im Althochdeutschen stehen neben *-ida* (< germ. *-iþa*) auch *-idī* (ursprünglich ein *n*-Stamm), *-idi* (*ja*-Stamm). Diese strukturelle Komplexizität geht noch in der altgermanischen Zeit verloren. So tritt das

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[2] Für die altgermanischen Sprachen sind Schwankungen zwischen den *a-* und *i*-Stämmen typisch; auch die Stammzugehörigkeit vieler Maskulina ist oft nicht genau zu bestimmen.

althochdeutsche *-ī(n)* in *-ī* über, dabei verliert es die Zugehörigkeit zur schwachen Deklination und geht in die starke *ō*-Deklination über. In struktureller Hinsicht weist dann bei *ī*-Wörtern nichts mehr auf die *ō*-Klasse hin.

Wie aus dem Gesagten ersichtlich ist, können Stammbildungssuffixe im Wort sowohl nach der Wurzel, als auch nach einem anderen Suffix stehen.[3]

Sowohl Wortbildungssuffixe als auch Stammbildungssuffixe treten in regulären strukturellen Wortkorrelationen auf. Vgl.:

ahd. *toufa* "Taufe" - *toufen* "taufen" (in *toufa* das Stammbildungssuffix *-ō-*), ahd. *wīhī* "Einweihung" - *wīhen* "weihen" (in *wīhī* das Wortbildungssuffix *-ī(n)*)

In den beiden Fällen sind mittels der Suffixe *-ō-*, *-ī(n)-* aktionale Nomina zu Verben gebildet.[4] Der Grund, aus dem diese Suffixe trotzdem verschiedenen Suffixklassen zugeordnet werden,[5] liegt offensichtlich im verschiedenen Transparenzgrad der Suffixe:

1) Stammbildungssuffixe verschmelzen in altgermanischen Sprachen mit Flexionsendungen, d.h. sie weisen keine einheitliche phonetische Form in verschiedenen grammatischen Formen eines Wortes auf. Vgl. die althochdeutschen Paradigmen von einem *ō*-Wort (*ō*-Stamm) und einem *ī(n)*-Wort (Wortbildungssuffix *ī(n)*):

toufa "Taufe" (ō-Stamm)

N.A.	toufa	Pl.	toufā
G.	toufa (toufu, toufo)		toufōno
D.	toufu (toufo)		toufōm (toufōn, toufon)[6]

[3] In KRAHE-MEID (1969, 46) wird mit Recht darauf hingewiesen, dass es wenig Sinn hat, zwischen primären (an die Wurzel antretenden) und sekundären (an einen bereits abgeleiteten Stamm antretenden) Suffixen zu unterscheiden, da viele Suffixe sowohl primäre als auch sekundäre Ableitungen bildeten.

[4] *Toufa* ist keine primäre Bildung, sondern eine Ableitung aus *toufen* "taufen", einer christlichen Lehnbildung aus germ. *daupjan* etymologisch "tunken, tauchen".

[5] Nur selten wird *-ī(n)-* der Gruppe von Stammbildungssuffixen zugeteilt, vgl. KUBRJAKOVA 1963, 82.

[6] Kasusendungen nach BRAUNE 1975, 192.

hōhī "Höhe" (ī(n))

N.G.D.A. hōhī (hōhīn)

Pl.N.A. hōhī (hōhīn)
hōhīno
hōhīm (hōhīn)[7]

2) Wörter mit Wortbildungsuffixen sind immer in formeller Hinsicht komplex: es ist klar, von welchen Basiswörtern[8] sie abgeleitet sind. Bei Stammbildungssuffixen liegen neben strukturell komplexen Wörtern - wie *toufa* zu *toufen* - viele unmotivierte Wörter vor, die weder strukturell noch semantisch gegliedert werden können.

3) Die Funktion von echten Wortbildungssuffixen ist des öfteren auf den ersten Blick sehr allgemein. Vgl. z.B. ahd. *wīhī* "Heiligkeit; Einweihung" zu *wīh* "heilig" oder *wīhen* "weihen": *wīhī* ist ein Eigenschaftsnomen (Adjektivabstraktum) oder ein aktionales Nomen (Verbalabstraktum); *-ī(n)* dient also in erster Linie zur Überführung des Adjektivs oder des Verbs in die Wortart "Substantiv". Diese allgemeine Funktion ist aber bei Wortbildungssuffixen regulär und reihenbildend. Motivationen für Wörter mit Stammbildungssuffixen lassen sich dagegen meistens auf keinen gemeinsamen semantischen Typ bringen (sieh auch unter 2).

Diese Argumente, die gewöhnlich explizit nicht formuliert werden, veranlassen dazu, eine Grenze zwischen Stammbildungssuffixen und Wortbildungssuffixen zu ziehen. So wird schon in WILMANNS' "*Deutscher Grammatik*" zwischen "den Gruppen, welche durch die Deklinationstypen bestimmt sind" und "Substantiven mit ableitenden Suffixen " unterschieden.[9]

Betrachten wir die nach den Kriterien 1)-3) vorgenommene Unterscheidung zwischen Stammbildungssuffixen und Wortbildungssuffixen, so müssen wir zugeben, dass die formellen Argumente für diese Unterscheidung stärker als die semantischen sind. Aus semantischer Sicht bilden die Paare wie ahd. *toufa* - *toufen* ohne Zweifel auch eine derivationelle Korrelation, genauso wie ahd. *wīhī* - *wīhen*; nur hatte das *-ō-*

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[7] Das Paradigma nach BRAUNE 1975, 209.

[8] Fertigen Stämmen, s. die Anmerkung 3.

[9] WILMANNS 1889, IX-X.

im Gegensatz zum Suffix *-ī(n)-* in den schriftlich überlieferten altgermanischen Sprachen keine nachweisbare Produktivität.

Neben Paaren wie ahd. *toufa - toufen* sind in den altgermanischen Sprachen andere mehr ausgebaute regelmäßige derivationelle Korrelationen bezeugt, in denen als Träger der regulären Wortbildungsbedeutung Stammbildungssuffixe auftreten. Vgl. die stammbildenden *-an-*, *-jan-* als Suffixe von Nomina agentis und maskulinen Personenbezeichnungen (ahd. *ezzo* "Esser", *gebo* "Geber", *skepfo* "Schöpfer" zu den entsprechenden Verben; got. *waurstwja* "Arbeiter" zu *waurstw* "Werk", *baurgja* "Bürger" zu *baurgs* "Burg, Stadt"); *-ōn-* bei der Motion von Feminina (ahd. *gastgeba* "Gastgeberin" zu *gastgebo* "Gastgeber")[10] u.a.

Aus diachroner Sicht sind derartige derivationellen Funktionen von Stammbildungssuffixen relativ unproblematisch, denn sie gehen auf die derivationelle Rolle von Stammbildung in der indogermanischen Vorzeit zurück.[11] In synchroner Hinsicht stellt der zwiespältige Charakter von altgermanischen Stammbildungssuffixen ein Problem für die morphologische Interpretation dar. Dieses Problem wurde am besten von E.S.KUBRJAKOVA in der "*Vergleichenden Grammatik der germanischen Sprachen*" (Moskau, 1963) herausgearbeitet. E.S. KUBRJAKOVA's Interpretation des eigenartigen morphologischen Status von altgermanischen Stammbildungssuffixen lässt sich folgenderweise zusammenfassen:

a) Unter altgermanischen Wörtern mit Stammbildungssuffixen gibt es isolierte Nomina wie z.B. got. *dags* "Tag", neben denen keine Bildungen von derselben Wurzel stehen.[12] Von ihnen unterscheiden sich diejenigen Substantive, neben denen andere Bildungen von derselben Wurzel erhaltengeblieben oder entstanden sind und die auf solche Weise Korrelationen mit anderen Nomina oder Verben aufgenommen haben. Soweit diese Korrelationen keinen vereinzelten, sondern einen systematischen Charakter haben, sind die Nomina mit Korrelatio-

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[10] Die *ō*-Motion von Feminina ist in den altgermanischen Sprachen nur vereinzelt bezeugt.

[11] Nach K.BRUGMANN's Bemerkung sind "stammauslautende Elemente" schon in der indogermanischen Zeit zu produktiven Formantien geworden, "wodurch gewisse Gruppen von Nomina gegen andere Nomina, die teils dasselbe, teils anderen Formantien hatten, sich abgrenzten" (BRUGMANN 1904, 313).

[12] KUBRJAKOVA 1963, 43.

nen als abgeleitete Nomina einzustufen.[13]

b) Verschiedene Stammbildungssuffixe können in verschiedenem Maße den derivationellen Morphemen nahe stehen. Je umfangreicher entsprechende Wortbildungsreihen sind und je regelmäßiger die Wortbildungsrelationen in diesen Reihen sind, mit desto größerer Sicherheit kann man ein Stammbildungssuffix als ein Wortbildungsmorphem bezeichnen. In solchen Fällen stellen Stammbildungssuffixe ein besonderer Typ von altgermanischen Affixen (derivationellen Morphemen — *N.P.*) dar.[14]

c) Da Stammbildungssuffixe den Flexionstyp eines Wortes bestimmen, kann die Wortbildung mittels Stammbildungssuffixe auch als Wortbildung durch Einordnung des Wortes in ein neues Paradigma definiert werden.[15]

Die Behandlung der altgermanischen Nomina nach den Kriterien a)-b)-c) schafft jedoch nicht alle Schwierigkeiten aus dem Wege.

Ganz deutliche Fälle der "Regelmäßigkeit" von derivationellen Relationen (b) sind meistens Konkreta wie die schon erwähnten Personenbezeichnungen auf *-an-*, *-jan-* u.a. Durch eine klare eigene "Gruppensemantik" heben sie sich von anderen - "nicht regelmäßigen" - *-an-* und *-jan-*Nomina ab. Die Regelmäßigkeit von derivationellen Relationen kann hier nicht in Zweifel gestellt werden, da zwischen Korrelaten reguläre semantische Beziehungen bestehen.

Viel komplizierter sind die Fälle, in denen semantische Beziehungen zwischen Korrelaten nicht so unverkennbar eine Modifikation der Semantik implizieren. Bei deadjektivischen Eigenschaftsnomina und deverbalen Abstrakta mit Stammbildungssuffixen z.B. scheint die Wortbildungsbedeutung mit der grammatischen Bedeutung des Substantivs völlig identisch zu sein. Solche Nomina unterscheiden sich von ihren Verb- und Adjektivkorrelaten auf den ersten Blick nur durch die Wortart. Diese "grammatische" bzw. "syntaktische" Wortbildung - die als Transposition[16] zu definieren wäre - hätte zweifelsohne einen Anspruch darauf, dem Wortbildungssystem zugeordnet zu werden, wenn wir wüssten, dass sie zur Zeit der schriftlichen Überlieferung noch produktiv war. Da wir es aber nicht wissen, können wir Eigenschafts-

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[13] Op. cit., S. 44

[14] Ebenda.

[15] KUBRJAKOVA 1963, 75.

[16] FLEISCHER 1982, 66.

II. Minimalpaare und reguläre Korrelationen bei Nomina mit Stammbildungssuffixen germ. *-ī(n)-//-ō-*

Wie schon erwähnt, wird das altgermanische *-ī(n)-* gewöhnlich den Wortbildungssuffixen zugeordnet. *-ō-* wird immer der Klasse von Stammbildungssuffixen zugeteilt, da es in den altgermanischen Sprachen nicht einmal bei der Motion von Feminina regelmäßig auftritt.

In PIMENOVA 2000 ist jedoch gezeigt worden, dass dem Stammbildungssuffix *-ō-* eine reguläre semantische Funktion in Minimalpaaren *-ī(n)-//-ō-* zugesprochen werden kann. Solche Minimalpaare sind im Althochdeutschen (8.-11. Jh.) und vereinzelt im Altniederfränkischen (9.-10. Jh.) und Gotischen (4. Jh.) bezeugt, d.h. in den altgermanischen Sprachen, die noch volle Endvokale beibehalten haben. Die distinktiven Merkmale, die die *-ī(n)*-Nomina und die *-ō-*Nomina in Minimalpaaren voneinander unterscheiden, müssen wir hier noch ein Mal kurz zusammenfassen, denn analoge Merkmale treten auch in den anderen Oppositionen mit Stammbildungssuffixen auf.

Die wichtigste Eigenschaft von *ī(n)*-Nomina ist ihre Fähigkeit, ein Merkmal dem Subjekt zuzuschreiben. Ein typisches Beispiel dafür ist die prädikative Merkmalzuschreibung. Vgl. ahd.

was ér ouh in ther *fári*, ther líut tharmit ni wári (Otfrid 4,8,28) "Er vergewisserte sich auch (wörtl. "Er war im Lauern"), ob auch keine Leute bei ihm wären"

— mit der Merkmalzuschreibung "Er war im Lauern" (er was in ther fari) = "lauerte" durch die präpositionale Verbindung mit dem *ī(n)*-Wort *fârî* vom Verb *fârên* "auflauern, nachstellen, verfolgen".

Die gegenübergestellten *ō*-Nomina können dagegen eine Handlung ohne Bezug auf jegliches Subjekt, als einen selbständigen Begriff ausdrücken; vgl. ahd.

Aller líut ginoto áhta tho thero drúto

noh dages híutu in wara so wónet io thiu *fára* (Otfrid H. 109-110) "Das ganze Volk verfolgte die Jünger, noch heutzutage bleibt zweifellos diese Nachstellung"

Für denominale Bildungen ist die Opposition "eine stetige inhärente Eigenschaft des Subjekts" — "eine Einzelerscheinung der Eigenschaft" typisch. Vgl. ahd. buôzzen únêri (Notker Gl. 2,123,1) "Schändlichkeit büßen" — unêra tuon (Notker 1,94,20; 1,148,1) "Unehre tun". Die Einzelerscheinung einer Eigenschaft stellt meist die Veräußerung dieser Eigenschaft vom Subjekt, ihre Übertragung auf ein Objekt dar, vgl. "ehrlos sein" — "etwas machen, was unehrlich, schändlich ist". Die Bezeichnung der stetigen inhärenten Eigenschaft

kann dagegen mit dem Subjekt selbst identifiziert werden; vgl. in den altniederfränkischen Psalmen (LVIII, 18) got min *genathi* min "Gott mein ist meine Gnade".

Die Opposition "Subjekt" — "Veräußerung vom Subjekt" verbindet die Merkmale von deverbalen und denominalen *-ī(n)-* und *-ō-* Bildungen zu zusammenhängenden Merkmalkomplexen:[18]

Subjekt /-ī(n)-	Veräußerung vom Subjekt /-ō-
Die Zuschreibung eines Merkmals an das Subjekt	Ein vom Subjekt losgelöstes Merkmal
Eine stetige, inhärente Eigenschaft; das Subjekt selbst als habitueller Merkmalträger	Eine Einzelerscheinung der Eigenschaft
Ein nicht veräußertes Merkmal	Ein veräußertes Merkmal, übertragen auf ein Objekt, Resultat u.a.

Die Relation "Subjekt — Veräußerung vom Subjekt" erscheint als Basisrelation auch bei anderen "abstrakten Modellen".

germ. *-ī(n)-/-jōn-//-ja-*

Die Varianz *-ī(n)-/-jōn* (Feminina)//*-ja-* (Neutra) betrifft ebenfalls denominale (deadjektivische) und deverbale Bildungen. In der gotischen Bibel (4. Jh.) entsprechen derivationelle Varianten mit *-ī(n)-*, *-jō(n)-* und *-ja-* meist einunddemselben Wort der griechischen Vorlage und bezeichnen nahestehende oder gleiche Bedeutungen. In vielen Kontexten werden die "Varianten" jedoch unterschiedlich — für verschiedene Unterbedeutungen eingesetzt. Der systematische Charakter dieser unterschiedlichen Verwendung spricht dafür, dass von Bedeutungsunterscheidungen der derivationellen "Varianten" bewusst Gebrauch gemacht werden konnte.

got. *aiwaggeli* (*ja*-Stamm) — *aiwaggeljō* (*jōn*-Stamm) "frohe Botschaft, Evangelium"

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[18] S. darüber ausführlich mit zahlreichen Belegen und mit einer Begründung in PIMENOVA 2000.

Die beiden Wörter sind Entlehnungen aus dem griech. εὐαγγέλιον (vgl. lat. *evangelium)*, die allerdings nach verschiedenen Paradigmen gehen.

In semantischer Hinsicht ist das feminine *aiwaggeljo* mit denjenigen *ōn/jōn*-Substantiven zu vergleichen, die ein Vorgehen bezeichnen. Vgl. *sakjo* "Streit" zu *sakan* "streiten", *reiro* "das Zittern, Erdbeben" zu *reiran* "zittern" u.a. In gleicher Weise wird *aiwaggeljo*, neben dem das Verb *aiwaggeljan* "das Evangelium verkünden" steht, in der aktionalen Bedeutung "das Predigen des Evangeliums" verwendet. Die deutlichsten Kontexte sind hier Ph 4,15, 2 Kor 2,12; 8,18, sowie 2 Kor 10,14, Thes 3,2 (analog Ph 2,22, Ph 4,3). Vgl.:

aþþan witub jah jus, Filippisius, þatei in anastodeinai *aiwaggeljons,* þan usiddja af Makidonai, ni ainnohun aikklesjono mis gamainida in raþjon gibos jah andanemis (Ph 4,15) "Ihr wißt aber auch, ihr Philipper, daß im Anfang des Evangeliums, als ich aus Mazedonien wegging, keine Gemeinde mich am gegenseitigen Geben und Empfangen beteiligt hat".

(in anastodeinai aiwaggeljons "im Anfang des Evangeliums" bedeutet hier "im Anfang des Predigens des Evangeliums")

aþþan qimands in Trauadai in *aiwaggeljons* Xristaus (2 Kor 2,12) "Als ich aber zur Verkündigung des Evangeliums Christi nach Troas kam"

Im Gegensatz zu *aiwaggeljo* tritt das sächliche *aiwaggeli* mit der aktionalen Semantik nicht auf. Die Verwendung des Wortes weist darauf hin, dass es "die Worte des Evangeliums; den Inhalt des Evangeliums" (die Bedeutung des inneren Objekts bzw. des Resultats) bezeichnet. In dieser Bedeutung überschneidet sich *aiwaggeli* mit der Bildung *aiwaggeljo*, der in einigen Kontexten diese Semantik ebenfalls zugeschrieben werden kann. Für die Verwendung von *aiwaggeli* im Gegensatz zu *aiwaggeljo* (Unterbedeutung 2. "Worte der Predigt") ist jedoch eine Syntagmatik typisch, die die Bedeutung "die Worte des Evangeliums" unverkennbar macht. Man vergleiche:

Aþþan kannja izwis, broþrjus, þatei *aiwaggeli* þatei merida izwis, þatuh jah andnemuþ, in þammei jah standiþ (1 Kor 15,1) "Ich tue euch aber, Brüder, das Evangelium kund, das ich euch verkündigt habe, das ihr auch angenommen habt, in dem ihr auch steht"

Die Verbindung von *aiwaggeli* mit *merjan* "kund tun" weist auf die Bedeutung "die Worte des Evangeliums" hin; durch das Verb "nehmen" erscheint das Evangelium als etwas Gegenständliches, was "genommen" werden kann. Man vergleiche mit der Bedeutung "die Worte des Evangeliums" auch die Belege:

af þaimei sumai afairzidai uswandidedun du *lausawaurdein* (Tim 1,6) "davon sind einige abgeirrt und haben sich leerem Geschwätz (der Geschwätzigkeit) zugewandt".

iþ þo dwalona usweihona *lausawaurdja* biwandei; unte filu gaggand du afgudein (2 Tim 2,16) "die unheiligen, leeren Geschwätze aber vermeide; denn viele werden zu weiterer Gottlosigkeit fortschreiten"

Die *ī(n)*-Bildung und die *ja*-Bildung verteilen sich hier ähnlich mit den oben angeführten "Varianten": die *ī(n)*-Bildung bezieht sich als Eigenschafts- oder Tätigkeitsbezeichnung auf ein Subjekt, die *ja*-Bildung hat dagegen auch eine objektbezogene Lesung "leere Worte, Reden".

Von der Labilität der semantischen Opposition *-ī(n)-*/*-ja-* im Gotischen zeugen einige Schwankungen zwischen *ī(n)*-Feminina und *ja*-Neutra in der gotischen Bibel. Vgl. *aglaiti* (*ja*-Stamm) und *aglaitei* (*īn*) in demselben Kontext:

þize jan-ni idreigondane ana unhrainiþai þoei gatawidedun, horinassau jah *aglaitja* (2 Kor 12,21 A, in B das *ī(n)*-stämmige *aglaiteino*) "die nicht Buße getan haben für die Unreinheit und Unzucht und Ausschweifung, die sie gemacht haben"

Wichtig ist jedoch, dass die Position, in der das *ja*-Neutrum *aglaiti* in A doch erscheint, eine Position der semantischen Veräußerung des Merkmals vom Subjekt darstellt, etwa "Ausschweifung machen". Dies bedeutet, dass das *ja*-Neutrum in A dort auftritt, wo seine Verwendung semantisch sinnvoll ist. Wie *aglaitei* in B zeigt, war jedoch die Verwendung von einem *ja*-Nomen in diesem Kontext nicht obligatorisch. Die Verteilung der *ī(n)*- und *ja*-Bildungen war offensichtlich nur durch eine funktionale Präferenz gesteuert.

Im Althochdeutschen finden sich die Beispiele der textinternen Varianz von *-ī(n)-* und *-ja-* bei Otfrid.

Bei deadjektivischen *î(n)*- und *ja*-Bildungen bei Otfrid ist die folgende Tendenz feststellbar: Bezeichnungen von bleibenden, inhärenten Eigenschaften gehen meist nach dem *î(n)*-Typ (Feminina), Bezeichnungen von veräußerlichten Eigenschaften bzw. von Einzelerscheinungen der Eigenschaften gehen häufiger nach dem *ja*-Typ (Neutra). Diese Tendenz entspricht der Wortbildungsbedeutung des *ī(n)*-Modells, wie sie auch in der Opposition mit den *ō*-Nomina zu Tage kommt.

Aufschlussreich ist hier besonders die "Genusverteilung" bei Eigenschaftsbezeichnungen mit dem zweiten Teil *-muati* "-mütig". Ungeachtet des lexikalisch gleichen zweiten Teils sind diese Bezeich-

Gimuati bezeichnet "Gnade, Wohlwollen" als etwas entäußertes von seinem Subjekt auch in 2,2,38:

Follan gótes ensti..., wáres inti gúates joh drúhtines *gimúates* (2,2,38) "(ihn /Jesu/), der voll ist Gottes Gnade, Wahrheit, Güte und des Wohlwollens Gottes"

Die Quelle des Wohlwollens, sein erzeugendes Subjekt ist hier der Gott Vater, als Inhaber dieser vom Subjekt entäußerten Gnade wird aber eine andere Person — Christus — dargestellt.

Keine Eigenschaft eines Subjekts, sondern die Taten ("das Veräußerliche") bezeichnet auch *ungimuati*:

Tház firdruag er állaz joh ouh méra ubar tház, al thiz *úngimuati* thuruh síno guati (3,14,110) "Das vertrug er alles und mehr als das, all Peinliches (alle Beleidigungen) durch seine Güte"

heizmuati "Zorn, Wut" kommt ebenfalls in solchen Kontexten vor, wo es die situative Erscheinung der Eigenschaft bezeichnet. Vgl.

inbrán er sar zi nóti in mihil *héizmuati* (1,20,2) "entbrannte er sofort in große Wut"(die selbe Wendung mit *inbrennan* in 4,19,57, mit *inbrestan* "ausbrechen" in 3,20,129)

Sie wégitun iro hóubit joh sprachun úbilo tharmít, spráchun tho zi nóti thaz iro *héizmuati* (4,30,8) "Sie schüttelten den Kopf und sprachen Schlechtes, sprachen ihren Zorn aus"

Die deadjektivischen *î(n)*-Nomina bei Otfrid bezeichnen also die einem Subjekt anhaftende Eigenschaft, die *ja*-Nomina — die Einzelerscheinung dieser Eigenschaft, das Objekt einer Handlung ("das, was das Subjekt macht"). Diese Verteilung stimmt völlig mit dem für *ī(n)*- und *ō*-Minimalpaare aufgestellten Schema überein. Als eine konsequente Gesetzmäßigkeit ist sie allerdings nur bei denjenigen Nomina wirksam, die innerhalb eines Textes derivationelle Varianten haben. Bei einem einzelnen Wort, besonders wenn dieses Wort "variantenlos" ist, läßt sie sich nicht immer feststellen. Wir müssen hier natürlich in Betracht ziehen, dass der semantischen Verteilung von *ī(n)*- und *ja*-Varianten die Tendenz zur Speicherung von suffixalen Nomina als fertigen strukturell stabilen lexikalischen Einheiten entgegenwirkte.

Im Allgemeinen überwiegen unter althochdeutschen (und gotischen) deadjektivischen Nomina die *ī(n)*-Bildungen. Sie treten als universellere Bildungen auf und erweisen sich als weniger markierte Nomina.

-ī(n)-//-ō- bei ahd. *-nessî//-nissa*

Da Stammbildungssuffixe an sekundäre Suffixe treten konnten, dürften sich bei echten Wortbildungssuffixen mit verschiedenen "ange-

hängten" Stammbildungssuffixen semantische Unterschiede ergeben haben. Solche semantischen Unterschiede sind in Einzelfällen im Althochdeutschen zu beobachten, z.B. bei den Suffixen *-nessî*/ *-nissî* (*niss-* + *-în*) und *-nissa* (*-niss-* +*-ō-*). Eine textinterne Varianz von *-nessî*// *-nissa* ist in der althochdeutschen Isidor-Übersetzung bezeugt. Zwar gibt es hier keine Minimalpaare *-nessî*//*-nissa*, aber die regulären semantischen Besonderheiten bei den *î(n)-*, *nessî-* und *nissa*-Nomina passen in die Gesetzmäßigkeit der Verteilung von *-ī(n)-*//*-ō-* hinein.

So heben sich das deadjektivische *berahtnessî* "Glanz, Licht" und das deverbale *ubarhlaupnessî* "(ständige) Übertretung, Sündigung" durch ihre "imperfektivischen" Merkmale von den *nissa*-Nomina *infleiscnissa* "Fleischwerdung, Menschwerdung", *intfancnissa* "Annahme", *araucnissa* "Verkündigung" ab, die einmalige Ereignisse bezeichnen. Die Imperfektivität erscheint hier als eine sekundäre Folge der Merkmalzuschreibung ans Subjekt ("Subjekt in der Handlung", "eine ständige inhärente Eigenschaft des Subjekts"). Häufiger stehen die *nissa*-Bildungen in der Isidor-Übersetzung den *î(n)*-Nomina gegenüber (hier gibt es auch Minimalpaare). Man vergleiche z.B.:

fora dhemu sindun dheodun ioh riihhi chihneighidiu in *ghilaubin* (I.6,12) "vor ihm sind Völker und Reiche geneigt im Glauben"

— mit der denkbaren Auflösung "vor ihm sind Völker und Reiche glaubend geneigt", d.h. mit der prädikativen Merkmalzuschreibung ans Subjekt (ähnlich: in rehteru *chilaubin* "im rechten Glauben" im Kontext I.41,13) und

christinheidi *chilaupnissa* chohoran (I.42,5) wörtl."hören den Glauben der Christenheit" = "hören den Inhalt des christlichen Glaubens", "hören, was der christliche Glaube ist"

— mit der Veräußerung vom Subjekt des Glaubens.[20]

Anhand solcher Beispiele dürfen wir annehmen, dass der strukturellen Komplexität von altgermanischen Wortbildungssuffixen (das eigentliche Wortbildungssuffix + Stammbildungssuffix) einst ihre semantische Komplexität entsprach. Stammbildungsbedingte semantische Unterschiede bei komplexen Wortbildungssuffixen lassen sich leichter in denjenigen Fällen rekonstruieren, in denen die gegenübergestellten Stammbildungssuffixe polare Bedeutungen der Opposition "Subjekt — Veräußerung vom Subjekt" trugen. Vereinzelte Fälle dieser Kom-

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[20] S. weitere zahlreiche Beispiele der *-î(n)-*//*-nissō*-Verteilung in der Isidor-Übersetzung in PIMENOVA 2000, 321-324.

plexität sind auch bei einigen anderen Wortbildungssuffixen zu beobachten.

germ. *-a-/-i-//-ō-*

In dieser Opposition sind einander die Maskulina auf *-a-/-i-*[21] und die *ō*-Feminina gegenübergestellt. Minimalpaare für diese Opposition sind vereinzelt. Eines der aufschlussreichen Beispiele ist das Paar mit den komplexen Suffixen *-ung//-unga bauhnunc* (Maskulinum, *a*-Stamm) "Zeichen, Zeigen" — *bauhnunga* (Femininum, *ō*-Stamm) "Bedeutung" in der Isidor-Übersetzung.[22] Die Wörter sind vom Verb *bauhnen* "bezeichnen, zeigen" abgeleitet; *bauhnunc* "Zeichen" bedeutet seiner Wortbildungsbedeutung nach "das Zeigende, das Zeigen", *bauhnunga* "Bedeutung" — "das Bezeichnete". Für die Motivation des *ung*-Wortes ist das Festhalten des verbalen Merkmals am Subjekt (agentivische Motivation) kennzeichnend, bei dem *unga*-Wort können wir das Festhalten des Merkmals am Objekt der Handlung "bezeichnen" (die Veräußerung vom Subjekt) feststellen. Die Semantik des *ō*-markierten Suffixes *-unga* weist hier die für *-ō-* typischen "objektbezogenen" Merkmale auf; das *-a-/-i*-markierte *-ung* steht auf dem "subjektbezogenen" Pol der Opposition.

Einen indirekten Hinweis auf die subjektbezogene Bedeutung der *-a-/-i*-haltigen Suffixe bietet das gotische *fulliþ* "Fülle" mit dem Suffix *-iþ-* (vergleichbar mit ahd. *-ida* < germ. *-iþō*):

silbo auk airþa akran bairiþ: frumist gras, þaþroh ahs, þaþroh *fulliþ* kaurnis in þamma ahsa (Mk 4,28) "von selbst bringt die Erde Frucht: zuerst den Halm, danach die Ähre, danach die Fülle der Ähre (= die volle Ähre)"

Nach dem Typ von subjektbezogenen Nomina schreibt hier das *-a-/-i-*Wort *fulliþ* das Merkmal "voll" dem Subjekt ("Ähre") zu; dabei ist seine Funktionsleistung mit der eines Adjektivs identisch.

Eine semantisch-kategoriale Parallele zu germ. **-iþa/i-* (Mask.) dürfte got. *-ōþu-* (Mask.), ahd. *-ôda/i* (Mask.) darstellen. Auf die ursprüngliche subjektbezogene Semantik des althochdeutschen *ôd*-Modells weist u.a. der hohe Anteil der *ôd*-Nomina aus "objektlosen" (intransitiven) Verben hin.

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[21] S. die Anmerkung 2.

[22] Zum ersten Mal behandelt in PIMENOVA 1998.

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On the Typology of Indo-European Suffixes

JENS ELMEGÅRD RASMUSSEN

I. **Overall structure.** The members of a tripartite Indo-European derived word with root, suffix and desinence are not on an equal footing as regards their phonological make-up. While roots may in principle contain any of the existing vowels, long or short, and the desinences any short vowel, suffixes can show only short //e// and whatever comes from that, or zero. If a suffix has a long vowel, there is always a sound rule at work: in the nom. **pə₂-tḗr* 'father' an old **-s* has lengthened the vowel of the suffix which may be posited as simply //-ter-//.[1] Likewise, if the suffixal vowel has *o*-timbre, it is by rule, most often one of reduction + lengthening: in **su̯é-sōr* 'sister', unstressed **-ser-s* must have been reduced to something like **-sors* before the **-s* lengthened the vowel and thereby saved it from being lost completely.

II. **Accent.** The main disturbing factor in Indo-European morphophonemics is the accent which works with full phonetic regularity in an unmistakable nucleus of old examples, but has also been utilized as a morphological device to distinguish between certain more or less well-defined word-classes (the *τόμος* : *τομός* or *bráhman-* : *brahmán-* type). The morphological shifting of the "contrastive accent" has been going on through many stages, and its effects vary with the material it has had to work on.

The basic rule of Indo-European accent is that one underlying vowel of a word is accented, while the other vowels are reduced and mostly disappear altogether.[2] If a given word-stem is extended by a

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[1] Though the disagreement is only of marginal relevance, I cannot accept SZEMERÉNYI's explanation by compensatory lengthening (e.g. SZEMERÉNYI 1970:109; 1996:116), i.e. **-tér-s* > **-térr* > **-tḗr*, for the same lengthening occurs in cases where the **-s* is retained, as it always is after a stop: **nép-ōt-s* 'nephew'.

[2] There are some vowels that do not disappear even when given the best of chances: thus, e.g., the dative sg. ending is always **-ei̯*, the 1st and 2nd pl. of the verb always end in **-me*, **-te*, and the thematic vowel is always **-e/o-*, quite irrespective of the accent; also the perfect sg. endings **-h₂e*, **-th₂e*, **-e* are invariably unaccented.

morpheme containing a vowel, the accent moves to the following syllable; hence the interplay of strong and weak forms of the paradigms. The regular accent movement between adjacent syllables gave the **proterodynamic** and **hysterodynamic** types which, being simply mobile, may be derived by the same principle.[3] The **amphikinetic** type must have polarized the accent movement to jump between the extremes, either by simple exaggeration or caused by the model of root nouns. The **acrostatic** paradigm type is rather obviously also one of original mobility, only here applied to a root with a long vowel: the gradation in *stḗu̯-/*stéu̯- 'invoke' is from *stḗu̯-/*stēu̯-́, i.e. Skt. *stáuti*, mid. *stáve* was once just as mobile as *dógdhi*, *duhé* (*dʰeugʰ- 'utilize'), but pretonic shortening of a long vowel still left a full vowel, and later the language moved every accent to the first full vowel of the word – if it was not there already.[4]

The same accent shift may be caused by a derivational suffix; thus, from *h$_1$és-ti/*h$_1$s-énti 'is, are', we find a further shift in the optative *h$_1$s-iéh$_1$-t/ *h$_1$s-ih$_1$-ént. Since this works so well with the verb, it is to be expected that the noun basically goes by the same rules, despite its many reshapings.

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[3] If it had any chance in the current mess of terminological jargon, one might suggest *progressive* as a term covering both (or, all) types in which the accent moves to the (or, a) following syllable.

[4] In most words this rule operates vacuously, since the loss of unaccented vowels has turned the word into a phonological monosyllable; thus, e.g., Ved. 3sg mid.opt. *kr̥ṇvīta* (IE *kʷr̥-n-u̯-ih$_1$-tó) or Gk. gen.sg. πατρός (IE *pə$_2$-tr-ós) are already accented on their first (and only) full vowel and so leave it at that. This may be the reason why the rule has gone unnoticed. – I see no support anywhere for STRUNK's analysis of *ḗ/é* as due to "Aufstufung" of an originally invariable *é* (STRUNK 1985). Quite apart from the many independent confirmations of the long vocalism as underlying in roots presenting "Narten" ablaut, STRUNK's theory is unnatural in the extreme: If there were two types *é/Ø* and *é/é* (i.e., in the latter case, stable *é*), the obvious creation of parallelism is not *é/Ø* : *ḗ/é* by introduction of an extra mora in the strong forms of the stable type, but rather simple levelling by introduction of *é* into the weak forms of the alternating type, the result being in that case invariant *é* across the board. It takes exceptionally good evidence to support a conclusion that an event of analogy leads to an increase in allomorphy. In the present instance there is even evidence against such an assumption: in general, the "Narten" examples patently have the status of isolated archaisms, wherefore it makes little sense to regard them as regularized (or, in my reading, irregularized) analogical creations.

III. Stem-formation constraints

III.1. **Constraints on complexity.** There are limits to the complexity of Indo-European stems: SZEMERÉNYI (1970:160-65, 1996:175-81) has explained the double behaviour of _i_- and _u_- stems by showing that the distribution of the genitives in _*-i̯-os/*-u̯-os_ versus those in _*-ei̯-s/ *-eu̯-s_ simply depends on the number of preceding consonants in the underlying stems: We have _*hou̯-i̯-ós_, _*p_$_e$_k̂-u̯-ós_, but _*mn̥-téi̯-s_, _*pr̥-téu̯-s_ (from IE _*hóu̯-i-s_ 'sheep', _*pék̂-u_ 'cattle', _*mén-ti-s_ 'mind', _*pér-tu-s_ 'ford, bridge'). In my interpretation this indicates that the _*-e-_ of the full-grade suffix form _*-tei̯-_ is in origin a prop-vowel inserted to avoid a stem ending in more than two consonants. The principle can apparently be extended to other stem-classes so as to cover, e.g., _*d_$_e$_ĝ_^{h}_-m-ós_ (_*déĝ_^{h}_-ōm_ 'earth') as opposed to _*sh_$_2$_-u̯én-s_ (_*sáh_$_2$_-u̯l̥_, _*-u̯ōl_ 'sun'), if only in the sense that the expansion of the amphikinetic type developed more easily with light stems than with more complex structures. This also indicates that Ved. _uṣás_ (gen.sg. of _uṣā́s_ 'dawn') is not from _*h_$_2$_us-s-és_ as so often posited, but is rather to be analyzed as _*h_$_2$_us-és-s_, which is incidentally confirmed by the dative _uṣáse_ whose structure is specifically _not_ amphikinetic. In view of this, one would not like to assume an original difference of paradigm type between the neuter _s_-stems and those that were not neuters, for the gen.sg. of neuters like _*mén-es-os_ is also best seen as a reshaping of a form in _*-és-s_ as recovered by SCHINDLER.[5] Note that in all of these nouns the paradigm type is merely mobile, the "weak" paradigm forms simply moving the accent to the next vowel there is in the underlying structure.

III.2. **The thematic vowel.** If a stem ends in a vowel, we have the "thematic vowel complex" with rules all its own, consisting of some very old reductions of an unstressed suffix-final vowel to /u/ or /i/, while an accented thematic vowel is retained as an interchange of /e/ and /o/ depending on a very simple rule governed by the voicing properties of the following segment. These rules, however, only apply to the oldest layer we can reach, while younger formations have widely generalized the _e/o_ shape so as to work also outside of the accent, just

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[5] SCHINDLER 1975. The gen. in _*-es-os_ has at least been supported by the dative _*-es-ei̯_ – and of course by the general principle that the marked member of an alternation has a greater chance of success than its unmarked counterpart.

as many other analogical forms must be accepted to make the actual shapes found throughout the morphology comprehensible; it may be pointed out that the degree to which such special pleading is needed does not exceed general experience with languages actually recorded.[6]

The "thematic vowel" is in itself a suffix, forming adjectives of belonging, e.g. ordinals, *septimus* being "belonging to *septem*"; even the subjunctive may be seen as expressing a subordinate action which, in an adjective-like manner, adds a further specification to the action expressed by the main-clause verb. The subjunctive morpheme is always *-e/o-, never *-i- or *-u-, which indicates that it is either relatively young or originally stressed. I assume the latter, reduplicated stems allowing the decision:

III.2.1. **Intermezzo on verbal reduplication.** Reduplicated forms basically accent the same element as their unreduplicated counterparts, but if the accent came to be more than a syllable away from the reduplication the latter attracted the accent: Thus *d^{h}i-d^{h}éh$_1$-ti 'puts' with accent on the root like *g^{wh}én-ti 'kills', but the 3pl, originally *d^{h}e-d^{h}eh$_1$-énti, threw back the accent onto the reduplication which therefore appears in its strong, i.e. *e*-form, while the rest of the word is reduced to zero-grade: PIE *d^{h}é-d^{h}h$_1$-n̥ti, Skt. *dádhati* 'they put'. But it apparently took longer for the accent to be retracted from a thematic vowel, so in a subjunctive like *ste-steh$_2$-é-t-i, the reduplication got reduced to *sti- before retraction occurred, the result being the thematic present type *stí-sth$_2$-e-ti.[7]

I cannot accept a reconstruction *mólh-/*mélh- for the type underlying Lith. *málti*, OChS *mlěti* (Proto-Slav. *mē̆lti) 'grind' proposed by JASANOFF 1994:158 (*mólh$_2$-e, 3pl *mélh$_2$-r̥[s]) and repeated by KÜMMEL in the present volume (implying *C[R]óT-ti/*C[R]éT-n̥ti or *CóRC-ti/*CR̥C-énti depending on root-structure),[8] the decisive rea-

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[6] On the *-to-/-tu-/-ti-* hierarchy see esp. OLSEN & RASMUSSEN 1999.

[7] I shall therefore quite possibly have to modify my earlier assessment of Ved. subjunctive 3sg *dádhati* as an archaism proving IE *e*-reduplication regular in such a case (thus RASMUSSEN 1999:253f [original version 1984]) and, instead, regard this as a commonplace instance of generalization of the stem-form of the rest of the forms belonging to the present aspect.

[8] KÜMMEL's parallelizing with SCHINDLER's classical treatment of IE root nouns is not relevant if the *o*-form of words like *pṓd-s, *nók^{w}t-s ultimately reflects the lengthening effect of the nominative marker *-s. In word-stems with underlying long /ē/ additional lengthening apparently gave an *o*-tinged result. I

of the laryngeal under apparently equal conditions can be regarded as completely regular only in a pre-stage with reduplication, for in reduplicated wordforms laryngeals do not surface as schwas. Therefore, this must be the IE intensive, i.e. the type seen in Ved. *marmartu* 'let him crush' (which may be the same lexeme as *málti*, or, if it is not, at least represents an example of the same structure, cf. its Vedic prs. *mr̥ṇā́ti*). The *o*-grade primary present was identified with the intensive by HIERSCHE 1963 on the eloquent basis of the function. KÜMMEL's objection that also a handful of verbs with radical **-e-* display the accent disturbance ascribed to Hirt's Law is neutralized if a contaminated reflex of the old intensive can have several vocalisms, as indeed appears to be the case: thus *málti* : *mlěti*, OIr. *melid* may be based on different dereduplications of indicative **ml̥-mólh-ti*, **mél-ml̥h-n̥ti*, subjunctive **mél-ml̥h-e-ti*. Then, rather than a refutation this represents a natural addition to the explanation I have presented in RASMUSSEN 1999:190 and 194f (1985:202 and 207). The reduction may even be seen as consistent, the result having in all cases the vocalism of the first accented syllable of the stem-alternant on which it is based.

III.2.2. **Change of thematic vowel to /i/**. Reduction to **-i-* also occurred in originally unaccented thematic vowels, as when *o*-stems become *i*-stems in the second part of bahuvrīhis (Ved. *dhūmá-gandhi-*, Lat. *inermis*, etc.). It is also seen when a thematic stem is derived from a noun which is already thematic, then **-o-* + **-o-* seemingly yields **-í-o-* with reduction of one thematic vowel to /i/ and later, of course, accentuation of the first full vowel (e.g. Skt. *mitrá-* : *mitryà-*); thus the span **-ío-* does contain a morpheme of belonging, only this is the **-o-*, not the **-i-*, which is simply the stem-vowel of the base-word which was reduced by a known rule.[9] In internal reconstruction all knowledge is precious, and we cannot afford to disregard any of what little we have.

The reduction of the thematic vowel has taken place in a number of stages, as OLSEN and I have tried to show (1999): Taking a 3sg verb like the Ved. aorist *á-kar* and compounds like *su-kŕ̥t-* to

[9] This as a fundamental point of disagreement with the analysis presented by SCHINDLER 1980. The basic argument is that, since athematic stems do not generally add an abstract-forming or adjectivizing **-i-* which seems basically restricted to thematic stems where it allegedly replaces the thematic vowel, the only viable common analysis of both types is that their morphological marking is zero, and the **-i-* is a simple phonetic variant of the thematic vowel itself.

represent an agent noun type *kʷér-t, we derive the participle *kʷr̥-tó- as an adjective of belonging ("what a maker has [made]"), and, in a substantivized form made by the "contrastive accent", *kʷér-tu- 'act of making' with a reduction to *-u- immediately after the accent, opposed to a further reduction to *-i- in the second member of compounds like Ved. súkr̥ti-.

A similar prehistory is to be assumed for the suffix *-i̯eh$_2$- of the deví́ type. The suffix of "adjectival feminine-collective" apparently consists of the "thematic vowel" + /h$_2$/, this giving, in unaccented position, a reduced form *-ih$_2$, whence asyllabic /*-yh$_2$/ which, when attached to any pre-existing stem, produced a new stem ending in more than two consonants and so inserted a vowel, the result being the suffix //-ieh$_2$//, ablauting *-́ih$_2$/*-i̯éh$_2$-. Substantivizations of this further created the vr̥kī́h̥-type, in which, to express the morphological contrast of part of speech, the suffix was accented, apparently already at a stage *-ih$_2$- which, having a full vowel [i], did not tolerate accent after it and so caused the type with columnal *-íh$_2$-.

III.2.3. **Caland's /i/**. A specific side-effect of the reduction of the thematic vowel all the way to /y/ [j] may be seen in the Caland /i/ which may be simply the way the expected underlying sequence turns out in the given environment. If we combine *h$_2$r̥ĝró- 'shining, swift' and *pēd-, nom. *pṓd-s 'foot', we get *h$_2$rĝrypōds with /r/ positioned in an initial cluster of six consonants:[10] it will be no great wonder if /r/ is here simply lost. This explanation will have the advantage of releasing the "Caland system" from its mysticism and making it a simple matter of phonetic reduction of the most natural kind. (Some further aspects of the matter are treated in section IV below.)

III.3. **Special stem modifications.** The restrictions on stem-final complexity seem repeated in the nasal presents: a sequence *lei̯kʷ-n- ends in too many consonants and ought to insert a vowel, but apparently the sonority sequence was first adjusted, and *lei̯kʷn- became

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[10] This may be overstating the case a bit, for the first part of the compound must have been accented somewhere and in all probability represents an example of the phenomenon of "accented zero-grade" I have treated in RASMUSSEN 1995. Before the development of a syllabic resonant in *h$_2$ŕ̥ĝ-, the accent was probably on a reduced shape of the root vowel, i.e. *h$_{2ə}$́rĝ(r)ypōds. Even this form, however, would have enough consonants in awkward clustering to account for the observed reduction.

stem-final, is always preceded by a vowel, this giving stems in //-ec-//, //-nec-//, (//-tec-//,) //-u̯ec-// with normal ablaut and the final consonant surfacing now as /s/, now as /t/.

The alternation /s/ ~ /t/ is observed in some well-known examples: 'month' is *$m\hat{e}h_1$-nōt-s*, *meh_1-nes-*; the pf.ptc.act. forms *u̯éi̯d-u̯ōt-s* 'knowing' with neuter in *-u̯os* and weak cases in *-us-*; we find derivatives in *-eto-* from *s*-stems like Skt. *námas* 'homage', Gaul. *nemeton* 'holy place'. The suffix *-tes-*, as in Ved. *srótas-* 'stream', may be a blend of the two variants, as strongly indicated when, from the same basic lexeme, Ved. *sravát-* 'stream' has Gk. ἐϋρρείτης 'flowing well' (*sreu̯-et-ēs*) beside it with the two variants superimposed.[12]

IV. **Stative complex.** There is a noticeable link between the *s*-stems and the stative verbs, and then of course with adjectives in the broadest sense. This whole connection, often referred to as the "Caland system", may be simply termed the "adjective system", seeing that this is what the matter is about, and that CALAND in point of fact only expressed himself on the *-i-* replacing a few suffixes (above all *-ro-*) in the first part of compounds.

The root *kret-* formed a substantival *u*-stem *krét-u-s* (Ved. *krátu-* 'skill') and, from that, an adjective by accent shift, giving *kr̥t-ú-s* (Gk. κρατύς 'strong'); the state of being *kr̥t-ú-s* is *krétos* (Gk. κράτος, Aeolic κρέτος 'strength, power'), and a stative verb from that is Gk. κρατέω 'be strong', IE *kr̥t-$\acute{e}h_1$-* with original present *kr̥t-h_1-i̯é-ti*. This line which could be repeated with many adjectives, shows that where we expect a denominative verb made from an *s*-stem abstract we find instead what looks like a denominative from a stem in //-eh_1-//. It is as if an underlying //kret-ec-// turns up as //kret-eh_1-//. Now, the two divergent consonants are not all that different: if one of them is mostly /s/, as we all accept, and if /h_1/ was a plain [h], it only takes an alternation of /s/ and /h/ to account for the derivation of stative verbs. Such an alternation is admittedly not an established fact for PIE, but there are indications that it may be more than just a shot in the dark: In his contribution to the present volume, MEIER-BRÜGGER derives the root of Gk. ἔθος / ἦθος 'custom', pf. εἴωθα 'am accustomed' from a collocation *su̯e-$d^h eh_1$-*; if the stem-final consonants of *s*-stems are ultimately identical with *h_1* one can understand *su̯é-d^hos*

[12] I have treated the *s/t* alternation in further detail in RASMUSSEN 1994.

directly as 'own behaviour' (and the long-vowel variant as _*su̯éh$_1$-d^{h}os_ 'the behaviour [exerted] by oneself' with the first member inflected in the instrumental); again, we note the stative formation in Lat. _solēre_ 'be accustomed' (with dialectal _-l-_); we may then here equate _*-d^{h}eh$_1$-_ with //-d^{h}ec-//.[13] If we are allowed to bring in the _t_-variant, we may cite _*h$_2$meh$_1$-_ and _*h$_2$met-_ for 'to mow' (Gk. _ἀμάω_ and Lat. _metō_), and _*kreh$_1$(i̯)-_ 'to sift' may be matched by _*kret-_ (OHG _redan_ 'sift'). LIV also has _*meh$_1$-_ and _*met-_ as 'abmessen', and POKORNY, IEW 82, gives "_awē-_" and "_awet-_" for 'blow' (as in the Hesych gloss _ἀετμόν· τὸ πνεῦμα_). Many languages show an alternation of /s/ and /h/, and Modern Irish has an alternation of /t/ and /h/, but we have no such rules for the protolanguage – except perhaps that /h$_1$/ seems to be preferred before /i̯/, and /t/ before a vowel. But even without a rule, this is much simpler by any standard than the known interchange of /m/ and /h$_2$/ seen in _*g^{w}em-/*g^{w}eh$_2$-_ 'go' or _*drem-/*dreh$_2$-_ 'run; sleep' which is curiously repeated by the first person markers _*-m_ and _*-h$_2$_, although, again, there is no rule to explain it.

I thus suspect that Gk. _κρατέω_ is based on a sequence //kret-ec-i̯é-// 'exert power' structured just like Ved. _namas-yá-ti_ 'renders homage', only the latter is a younger formation made with the synchronic means of a later time.

V. **Suffix structure -eCo-**. The _s/t_ alternation observed in _námas_ as opposed to _nemeton_ raises the question of the ablaut underlying suffixes of the structure _*-eCo-_ like _*-eto-_, _*-ei̯o-_, _*-eno-_, _*-ero-_, _*-elo-_. An answer is suggested by the alternation found with the adjective-of-material _*-ei̯o-_ which in Mycenaean Greek forms its feminine in /-ijā-/ as established by HEUBECK 1985 and confirmed by HAJNAL 1994 (esp. pp. 79-81). HAJNAL derives this from IE _*-éi̯o-s_, _*-ih$_2$_ with an elaborate series of secondary reshapings. I would take it to reflect the old accent shift in IE collectives; if the neuter sg. ended in _*-éi̯o-m_, its plural could have _*-ía-h$_2$_, a hunch confirmed by the lexicalized forms Ved. _hr̥dáyam_ and Gk. _κραδίᾱ_ 'heart'. The collective must have been formed with shift of accent to the ending, thereby leaving the penultimate to be reduced to /i/. I would then suggest that _*-etó-_ as accented

[13] I am thus toying with the possibility that we should not posit _*su̯é-d^{h}h$_1$-os_ with an _s_-stem suffix based on the zero-grade of the full root _*d^{h}eh$_1$-_, but simply _*su̯é-d^{h}os_ as the reflex of underlying unsuffixed _*su̯é-d^{h}eh$_1$-_. I realize, however, that if _*su̯é-d^{h}h$_1$-os_ is correct after all, the evidence should look the same.

in Gk. ἑλετός 'palpable', Ved. *yajatá-* 'reverend' is influenced by its collective *-éta-h_2 seen in the abstract suffix of Germanic *-*iþō*. The resilience of the *-*e*- can easily be motivated by the undesirable homonymy with the participle in *-*tó*- which would have resulted if regular phonetic development had been given a free course.

The behaviour of *-*ero*- and *-*tero*- looks more disquieting, cf. Gk. πότερος, Ved. *katará-* 'which of two' where the accent skips the middle vowel: why was that vowel not lost? In the preform of Ved. *kútra* 'where' it *is* lost, though the exact inflectional form is unclear (endingless locative?). This looks like the remains of an old movable accent in the neuter form with sg. *-*ró-m* and pl. *-*éra*-h_2 (or the reverse, i.e. sg. *-*éro-m*, pl. *-*rá*-h_2), the contrastive accent causing "vr̥ddhi", then later generalization of full *-*ero*- and polarization of the accent, as also plainy secondarily in Ved. *ádhara-* 'lower', adv. *adharā́t* 'underneath'. Then this is a suffix with a vowel of its own, i.e. *-*ero*-, not *-*ro*-.

VI. **The -nt- complex.** A special surprise is offered by stems in /-nt/. Others address the suffix complex of *nt*-stems, what is important to me is that the cluster /nt/ behaves just like a single consonant. The full grade is /-ent-/, not */-net-/ as with other suffixes of more than one consonant. That arouses the suspicion that /nt/ *is* an original single consonant, and that a prestage of IE had prenasalized stops as suggested by MARTINET (e.g., 1986:170f). We may imagine that the two allomorphs of the passive participle *-*tó*- and *-*nó*-, once in complementary distribution (**mr̥-tó-s* 'dead', but *strh₃-nó-s* 'scattered'), derive from a single old *-^{n}*to*- which is then, in its turn, simply an adjective of belonging made by adding *-*ó*- to the active participle in //-^{n}t-// which may then be an allomorph of the /-t/ of third person. On this basis we may get a better understanding of the other third persons: There is external evidence suggesting that the dual and plural markers were once something like *-γ and *-δ. In the dual we now expect *k^{w}ér-^{n}t-γ to insert a vowel and become *k^{w}er-^{n}téγ, which may well be the actual preform of IE *k^{w}r̥-té;[14] and in the plural the dental might well interact with the verb-noun marker /-^{n}t-/, giving *k^{w}ér-^{n}t-δ in which it would not be unnatural if /-^{n}tδ/ developed into a long

[14] Supposing some such form to underlie the secondary ending of Gk. -τᾱν, Skt. *-tām*, primary Skt. *-tas*, and OCS *-te*.

prenasalized dental (or simply a sequence /nt/ with full segmental elements) and produced *k^wer-ént > PIE *k^wr-ént.

For the details of the alternation *t/n/nt* I refer to Birgit OLSEN (2001 and the present volume). While we find ourselves in agreement on many points, my temperament makes me less hesitant to include the variant in /-r/: The feminine of *-*u̯en(t)*- appears to have *-*u̯er*-: Ved. *r̥tā́vā*, *-ānam*, fem. *r̥tā́varī* 'righteous', and Gk. *πίων*, *πίειρα* matching Ved. *pī́vā*, *-ānam*, fem. *pī́varī* 'fat'. The form in /-r/ lost or reduced its productivity very early, for there is no lack of feminines in *-*nt-ih*$_2$ from the active participle, forms which, if based on innovation, are nevertheless older than the basic ablaut rules by which they have been hit (cf. normal gradation in Ved. *sán*, *sat-ás* 'being'). In this long time-perspective one cannot expect to find smooth rules operating without exceptions on all the material as it has turned out in a synchronic stage like the protolanguage. I also take the word-final variant to be /-r/ (thus in neuter *r/n*-stems), reserving /-n/ to the position before certain added consonants (giving masc. *-*ōn*), and also at the juncture where a particle once followed there seems to have been /-en/. If the loc. of 'winter', Skt. *héman*, is expanded by the thematic vowel of belonging, we get not *-*eni-o*-, but *-*eri-n-o*- with insertion of a hiatus-filling /-n-/ and dissimilatory treatment of the stem consonant as /-r-/: Gk. *χειμερινός*, Lat. *hībernus*. The added /-n-/ must be the *νῦ ἐφελκυστικόν* of Greek which is found to go back to IE.[15]

VII. **General conclusion.** Using the rules regarding the "thematic vowel" and our observation that overcomplex stems are alleviated by vowel insertion, we can thus sense an earlier system of regularity in some of the prominent places of apparent chaos in IE morphology. In trying to make out how the PIE morphological system developed we must use all available sources of information about its earlier stages. Much is lying around in ruins in the language itself, indicating what phonological changes the language has gone through. I have tried to make use of some of that here. But the ruins of the old structures I have set out to uncover here may be so few and worn-down that their testimony is helplessly overshadowed by that of later formations, themselves archaic enough to cause considerable trouble. It will

[15] I may suggest this as the starting point of the productive Slavic adj.-forming suffix *-ьнъ*. A hiatus-filling nasal is also seen in Vedic, cf. the notation of pragr̥hya words like *ú* as *úṃ íti ú* in the *padapāṭha*.

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Reste von *e*-Hochstufe im Formans hethitischer *n*-Stämme?

ELISABETH RIEKEN

Die geschlechtigen *n*-Stämme sind in der sprachhistorischen Literatur zum Hethitischen häufiger behandelt worden als viele andere Stammklassen.[1] Vor allem OETTINGER und MELCHERT haben sich diesem Thema gewidmet, in knapper Form auch HARÐARSON.[2] Es hat sich jedoch bisher keine Communis opinio hinsichtlich ihrer Ursprünge herausgebildet: Die drei Gelehrten vertreten drei verschiedene Auffassungen. Es sollen daher im folgenden neue Gesichtpunkte in die Diskussion eingebracht werden.

Gewöhnlich werden die geschlechtigen *n*-Stämme des Hethitischen auf synchroner Ebene in drei Typen unterteilt.[3] Dies geschieht auf der Grundlage der Form des Nom. Sg., des Akk. Sg. (zusammen mit dem Nom. Pl. und Akk. Pl.) und des Gen. Sg. (gemeinsam mit den anderen obliquen Kasus). Der erste Typ wird u. a. durch *summanz(a)* repräsentiert. Die drei relevanten Kasusformen lauten Nom. Sg. *summanz(a)* ⟨*šu(-um)-ma-an-za*⟩, Akk. Sg. *summanzanan* ⟨*šu-um-ma-an-za-na-an*⟩, Gen. Sg. *summanzanas* (vgl. Dat. Sg. ⟨*šu-ma-an-za-ni*⟩). Der wichtigste Vertreter des zweiten Typs ist das Wort für den "Adler": Nom. Sg. *ḫā́ras* ⟨*ḫa-a-ra-aš*⟩, Akk. Sg. *ḫā́ranan* ⟨*ḫa-a-ra-na-an*⟩, Gen. Sg. *ḫā́ranas* ⟨*ḫa-a-ra-na-aš*⟩. Schließlich besteht der dritte Typ im wesentlichen in den Nomina mit dem Herkunftssuffix *-um(ma)(n)a-*. Die Flexion einer solchen Herkunftsbezeichnung lautet beispielsweise Nom. Sg. *ḫattusum(m)as* ⟨ ˙*-um-ma-aš*, ˙*-u-ma-aš*⟩, Akk. Sg. *ḫattusum(m)enan* (vgl. Nom. Pl. ˙*-u-me-né-eš*⟩, Gen. Sg. *ḫattusummnas* (vgl. Dat. Sg. ˙*-u-um-ni*⟩) "der aus Ḫattuša".

Es scheint also klare Regeln zu geben; aber schon ein kurzer Blick auf die wirklich bezeugten Formen zeigt, daß der Ansatz der eben genannten Typen und ihrer Flexion in hohem Maße auf Abstraktion ba-

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[1] Alan J. NUSSBAUM möchte ich sehr herzlich für seine förderliche Kritik und hilfreichen Hinweise danken.

[2] OETTINGER 1980 und 1982; MELCHERT 1983; HARÐARSON 1987, 118-122.

[3] Belege finden sich bei OETTINGER 1980 und 1982 sowie in den einschlägigen Wörterbüchern.

siert. Gerade im Falle von *summanz(a)* gibt es Schwankungen im Stammauslaut. Hier stehen nämlich neben dem *n*-Stamm *summanz(a)n-* auch der *a*-Stamm *summanzā́-* (vgl. Nom. Sg. ⟨*šu-um-ma-an-za-a-aš*⟩ und Akk. Sg. ⟨*šu-ma-an-za-n*˚⟩), und der Nom. Sg. *summanz(a)* ⟨*šu-um-ma-an-za*⟩ mit unklarem Stammauslaut. Ähnliches findet sich bei anderen Wörtern dieses Flexionstyps: im Vogelnamen *laḫḫanz(a)*^MUŠEN^/*laḫḫanza-*^MUŠEN^/*laḫḫanzan-*^MUŠEN^, in der Baumbezeichnung ^GIŠ^*alanz(a)*/^GIŠ^*alanza-*/^GIŠ^*alanzan-* und beim Wort für "Seele" *istanz(a)*/*istanza-*/*istanzan-*. Zudem hat sich jüngst herausgestellt, daß *summanz(a)* entgegen der früheren Annahme nicht die Bedeutung "Faden, Band" besitzt, sondern die "Binse" bezeichnet und somit einen Pflanzennamen darstellt.[4] Dadurch entfällt die Gleichung mit gr. *ὑμήν* "Membrane, feine Haut" und gleichzeitig der einzige vermeintlich beweiskräftige Grund, *summanz(a)* wie gr. *ὑμήν* — MELCHERT und HARÐARSON folgend[5] — auf einen primären *n*-Stamm mit hysterokinetischer Flexion zurückzuführen. Da *laḫḫanz(a)*^MUŠEN^, ^GIŠ^*alanz(a)* und *istanz(a)* keine unmittelbare außerhethitische Entsprechung mit vergleichbarer Stammbildung besitzen, ermöglichen sie ebenfalls keine Rückschlüsse auf den zugrundeliegenden urindogermanischen Akzent- und Ablauttyp. Der hethitische Flexionstyp auf *-anz(a)*/*-anza-*/*-anz(a)n-* wird deshalb im folgenden vorsichtshalber aus der Betrachtung ausgeschlossen.

Die Flexion des zweitgenannten Typs hethitischer geschlechtiger *n*-Stämme (vgl. Nom. Sg. *ḫā́ras* "Adler", Akk. Sg. *ḫā́ranan*, Gen. Sg. *ḫā́ranas*) ist weitgehend regelmäßig. Die einzige Ausnahme besteht in der wechselnden Position der Pleneschreibung. So finden wir neben ⟨*ḫa-a-ra-aš*⟩ auch ⟨^MUŠEN^*ḫa-ra-a-aš*⟩ sowie neben ⟨*ḫa-a-ra-na-an*⟩ auch ⟨^MUŠEN^*ḫa-ra-na-a-an*⟩. Letzteres tritt jedoch nur in jüngeren Texten auf, so daß wir bei diesem Wort für die althethitische Zeit zuversichtlich von einem Paradigma mit durchgehend betonter Wurzel ausgehen können.[6] Die unmittelbare Entsprechung von heth. *ḫā́ras* und ahd. *aro*, aisl. *ǫrn* "Adler" führt zu einem Rekonstrukt mit Nom. *$h_3$ér-ō und Akk. *$h_3$ér-on-m̥.[7] Im SCHINDLERschen System reicht dieser Ansatz mit *o*-stufigem Suffix bereits aus, um den Akzent- und Ablauttyp als amphikinetisch zu bestimmen, weil nach SCHINDLER diese Form des

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[4] Freundlicher Hinweis von Craig MELCHERT. Vgl. demnächst CHD Š.

[5] MELCHERT 1983, 8-10 und HARÐARSON 1987, 120.

[6] Vgl. OETTINGER 1980, 167.

[7] Zur Rekonstruktion mit *h_3 s. MELCHERT 1987, 21 und KIMBALL 1999, 393.

Suffixes auf den amphikinetischen Typ beschränkt ist.[8] Aber auch wenn man dem nicht folgt, wird man weder auf den akrostatischen noch auf den proterokinetischen Typ zurückgreifen, da sich im Bereich der geschlechtigen *n*-Stämme keiner von beiden überzeugend für die Grundsprache nachweisen läßt.[9] Unabhängig davon, welchen Typ man zugrunde legt, muß man in jedem Fall davon ausgehen, daß der Stamm der schwachen Kasus durch den starken Stamm *$^*h_3$er-on-* des Akkusativs ersetzt worden ist.

Demselben Typ wie *ḫáras* müssen entgegen früheren Behauptungen'[10] von Hause aus auch heth. *isḫimás* "Band" und *istámas* "Ohr" sowie **samas* "Fundament" angehört haben, da sie in den ältesten Texten noch den Akk. Pl. *isḫimánus* ⟨^{KUŠ}*iš-ḫ*]*i-ma-a̩-nu̩-uš*⟩, *istámanus* ⟨*iš-ta*[*(-a-ma-nu-uš-)**⟩ bzw. *samánus* ⟨*ša-ma-a-nu-uš*⟩[11] aufweisen, also einen *a*-Vokalismus, der dem von *ḫáran-* entspricht. Erst später treten die Formen mit *e*-Vokal im Suffix auf.

Der dritte der oben genannten Typen besteht außer in den schon erwähnten Nomina auf *-um(m)as*, *-um(m)enan*, *-ummnas* auch im Wort für den "Zeugen", Nom. Sg. *kutruu̯as* ⟨*ku-ut-ru-u̯a-aš*⟩, Nom. Pl. *kutruu̯enes* ⟨*ku-ut-ru-ú-e-né-eš*⟩. Das Problem besteht darin, die Herkunft des *e*-Vokals im Suffix der starken Kasus außerhalb des Nom. Sg. zu erklären. HARÐARSON schlägt vor, ein proterokinetisches Paradigma zu rekonstruieren und den Ursprung des suffixalen *e*-Vokals in den obliquen Kasusformen zu suchen.[12] Nun gibt es - wie eben bereits erwähnt - einerseits keinen überzeugenden Hinweis für die Existenz eines solchen Typs bei den *n*-Stämmen; andererseits ist die im Hethitischen bezeugte Verteilung von Formen mit *e* und ohne *e* genau andersherum als die erwartete: *e* tritt regelmäßig in den starken Kasus auf, während es in den schwachen Kasus mit ganz wenigen Ausnahmen fehlt.

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[8] Danach weisen der akrostatische und der proterokinetische Typ auch bei geschlechtigem Genus ein schwundstufiges Suffix in den starken Kasus auf, vgl. den Nom. Sg. und Akk. Sg. der geschlechtigen proterodynamischen *i-* und *u*-Stämme auf **-is, *-in, *-us, *-un* (freundlicher Hinweis von Alan J. NUSSBAUM).

[9] Anders OETTINGER 1980, 46; HARÐARSON 1987, 120.

[10] Z.B. HARÐARSON 1987, 120; OETTINGER 1980, 48.

[11] Belege bei KIMBALL 1999, 418.

[12] HARÐARSON 1987, 120.

OETTINGER rekonstruiert indessen ein hysterokinetisches Paradigma für diese Stämme.[13] Hysterokinetische *n*-Stämme sind für die Grundsprache zweifellos anzunehmen. Außerdem stimmt bei diesem Typ die für das Urindogermanische vorauszusetzende Verteilung von Formen mit **e* in den starken Kasus und Formen ohne **e* in den schwachen Kasus mit der im Hethitischen bezeugten überein. Die zunächst als so naheliegend erscheinende Lösung stößt jedoch auf Schwierigkeiten. Um diese darzustellen, werden im folgenden die verschiedenen Beispiele dieses Flexionstypus einzeln behandelt.

Die *n*-Stämme auf *-um(m)as*, *-um(m)enan*, *-ummnas* enthalten zweifellos entweder das grundsprachliche Formans **-u̯en-/-u̯on-* oder **-men-/-mon-*. Im ersten Fall, also bei einer Herkunft aus **-u̯en-/ -u̯on-*, hat dieses zunächst eine SIEVERSsche Variante **-uu̯en-/-uu̯on-* ausgebildet, die sich dann lautgesetzlich durch den Wandel von **u̯* > *m* neben *u̯* im Vorhethitischen zu **-umen-/-umon-* entwickelt hat.[14] Im zweiten Fall hat der Vokal *-u-* vor dem ererbten Suffix seinen Ursprung in einer Resegmentierung in Ableitungen mit *u*-stämmigen Basen oder - wahrscheinlicher - in einem anaptyktischen Vokal, der zwischen stammauslautendem Konsonanten des Basisworts und suffixanlautendem *-m-* eingeschoben worden ist.[15] Das Hethitische hat dieses Suffix wie in *ḫattusum(m)as* "der aus Ḫattuša" für die Bildung sekundärer denominaler Herkunftsbezeichnungen nutzbar gemacht.

Vergleichbare Bildungen aus dem Lateinischen und Griechischen zeigen, daß in diesen Sprachen ein denominales, auf **-mon-* zurückgehendes Sekundärformans mit ursprünglich adjektivischer Funktion gebraucht wurde, so in der lateinischen Bezeichnung der Erdgottheit *Tellumō*, die von derselben Basis wie *tellūs*, *tellūris* "Erde" abgeleitet ist und von Hause aus "zur Erde gehörig" oder "die Erde besitzend" bedeutet hat; gr. *δαιτυμών* "Gast" zu *δαιτύς* "Mahl" mit der Grundbedeutung "zum Mahl gehörig" oder "das Mahl besitzend"; gr. *ἀκρεμών* "Zweig" zu *ἄκρον* "Ende, Spitze, höchster Punkt".[16] Das Beispiel von gr. *ἀκρεμών* "Zweig", das ursprünglich entweder die

[13] OETTINGER 1982, 173-177.

[14] Vgl. LAROCHE 1960, 170-173, der auch das luwische Formans zur Bildung von Herkunftsbezeichnungen *-u̯ann(i)-* und lyk. *-ñni-* hier anschließt. Weitere, meist überholte Vorschläge sind bei MELCHERT 1983, 4 gesammelt.

[15] Zu anaptyktischem *u* s. OETTINGER 1976 und RIEKEN 2000.

[16] Vgl. etwa BRUGMANN 1906, 241.

Bedeutung "den höchsten Punkt innehabend" oder "zum höchsten Punkt gehörig" besessen hat, zeigt, wie bei einer Lokalangabe als Derivationsbasis die lokativische Semantik in einer von Hause aus possessiven Ableitung bzw. Zugehörigkeitsbildung zustande kommen kann. Ein Sekundärsuffix **-u̯on-*, das sich weitgehend parallel zu **-mon-* verhält, ist beispielsweise aus gr. ὀπάων "Gefolgsmann" (aus **sok^{w}eh$_{2}$-u̯on-*, vgl. auch ved. *maghá-van-* "gabenreich") bekannt; es weist aber keine lokale Bedeutung auf.[17] Sekundäre denominale Ableitungen mit *e*-stufigem Suffix **-men-* oder **-u̯en-* mit geschlechtigem Genus sind indessen nicht bekannt. Auch primäre Bildungen von der Wurzel mit **-men-* oder **-u̯en-* sind weitaus seltener als solche mit **-mon-* oder **-u̯on-*. Es liegt dem hethitischen Herkunftssuffix auf *-um(m)as*, *-um(m)enan*, *-ummnas* also mit großer Wahrscheinlichkeit das Formans **-mon-* zugrunde, das sich auch im Griechischen und Lateinischen zeigt.

Die Frage nach dem Akzent- und Ablauttyp ist bei solchen Sekundärbildungen natürlich problematisch. Aber es ist anzunehmen, daß das Sekundärsuffix den Ablaut des Primärsuffixes nachahmt. Auf der Basis des genannten außeranatolischen Vergleichsmaterials erscheint es am plausibelsten, für das Hethitische von Bildungen mit einem *o*-stufigen Formans **-mon-* auszugehen, die quasi-amphikinetische Flexion besaßen, d. h. **-mon-* in den starken Kasus stand schwundstufiges **-mn-* in den schwachen Kasus gegenüber.[18]

Entsprechendes gilt für das hethitische Wort für "Zeuge" *kutruu̯as* mit dem Nom. Pl. *kutruu̯enes*. Das Wort ist von uridg. Basis **k^{w}t-ru-* (< **k^{w}t-ur̥-* vor Konsonant) "vier" abgeleitet und weist das Sekundärformans **-u̯on-* auf.[19] Dasselbe Suffix findet sich nämlich

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[17] SCHINDLER 1975, 63.

[18] MELCHERT 1983, 15-19 erklärt die Entstehung dieses Typs folgendermaßen: Ausgangspunkt sind die neutralen proterokinetischen *men*-Stämme, deren allgemeine Funktion als Nomina actionis verschiedene Arten der Konkretisierung zuläßt, u. a. als eine Lokalangabe im Falle eines Basiswortes mit lokaler Funktion (vgl. engl. "parking", "landing"). Von diesen Neutra konnten adjektivische Ableitungen durch Thematisierung (auf **-mn-o-*) oder mittels interner Derivation durch Überführung von der proterokinetischen in die amphikinetische Flexion (auf **-mōn/-mon-/-mn-*) geschaffen werden. Wie ihre Grundwörter besaßen sie eine lokale Funktion: "zu Ort *x* gehörig"). Das Formans wurde schließlich auch für Sekundärbildungen gebraucht.

[19] Abweichend OETTINGER 1982, 174 Anm. 46, der von individualisierendem **-(e)n-* ausgeht, ohne allerdings *-u-* in h.-luw. *triwan-* zu erklären. Ganz anders PUHVEL in HED 4, 88f. (mit Belegmaterial).

⟨URU*lu-ú-i-u-ma-na-aš*⟩ "des Mannes aus Luwien",[25] aber selbst hier könnte eine defektive Schreibung für ⟨ *-u-um-ma-na-aš*⟩ mit Auslassung des Zeichens ⟨UM⟩ vorliegen.

Als weiterer Schritt, aber noch in vorhethitischer Zeit fand die Assimilation von **-mn-* zu *-mm-* statt. Ein Beispiel für diesen Lautwandel bietet heth. *mimma-* "sich weigern" < **mí-mn-ō* (vgl. den Typ ved. *sī́dati*, *tíṣṭhati*). Entgegen MELCHERT ist er jedoch auf die Stellung hinter dem Akzent beschränkt;[26] anderenfalls bliebe der Wechsel von *-mm-* und *-mn-* in *karimm(a)n-* n. "Tempel" problematisch. Im N.-A. Pl. *karimmi* mit der Endung *-i* ist die Assimilation erfolgt, denn in der starken Kasusform war mit großer Wahrscheinlichkeit der Vokal *i* vor dem Suffix betont (vgl. die singuläre, parallel strukturierte Form *ka-ru-ú-um-mi* aus KUB 31.88 II 7 mit Pleneschreibung des *u*-Vokals). In der Ableitung *karimmnāla-* hingegen, wo der Akzent hinter dem Suffix auf dem Formans *-āla-* (vgl. ⟨É*ka-ri-im-na-a-la-aš*⟩ lag, bleibt *n* bewahrt. Dieselbe Erklärung trifft sicher auch für die obliquen Kasusformen zu, obgleich dies nicht durch Pleneschreibungen belegt werden kann. Da der N.-A. Sg. nicht existiert, kann man die Bewahrung der Konsonantenverbindung *-mn-* in *karimm(a)n-* - anders als bei *lāman*, *lamnas* "Name" - nicht auf den Einfluß dieser Kasusform zurückführen, sondern sie muß ihren Ursprung in der Ableitung bzw. in den obliquen Kasus haben.[27]

Dementsprechend hätte im Akk. Sg. *ḫattusúmnan* die Assimilation stattfinden müssen, im Gen. Sg. *ḫattusumnás* aber nicht. Um die so entstehende Unregelmäßigkeit des Paradigmas zu verhindern, wurde der Lautwandel nicht durchgeführt. Als Konsequenz daraus entstand aber ein Sproßvokal zwischen *m* und *n*, der den Akzent auf sich zog,[28] so daß das Paradigma nun folgendermaßen lautete: Nom. Sg. *ḫattusū́mas*, Akk. Sg. *ḫattusumḗnan*, Gen. Sg. *ḫattusumnā́s*. Eine vergleichbare Entwicklung hat OETTINGER als Ursache für das Nebeneinander von heth. *parsḗna-* "Gesäß, Lenden" < **pérsneh₂-* und *parsnāe-* "sich

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[25] KBo 6.2 I 45'' (ah. Ns.).

[26] 1994, 81.

[27] Das bedeutet selbstverständlich nicht, daß nicht verschiedene Ausgleichserscheinungen eintreten können wie z. B. die sekundäre Einführung von assimiliertem *-mm-* < **-mn-* in die obliquen Kasus.

[28] Vgl. MELCHERT 1994, 174f. (für **tri-* "drei" in heth. *te-ri-ia-* und k.-luw. *tar-ri-ia-*) und KIMBALL 1999, 196.

hinhocken" vorgeschlagen, wo in der denominalen Ableitung der Akzent nach hinten verlagert wird.[29]

In der darauffolgenden Stufe der Entwicklung wurde einerseits **m* vor **n* geminiert[30] und der geminierte Nasal aus den schwachen Kasus mehr oder weniger konsequent in die starken Kasusformen eingeführt: Nom. Sg. *ḫattusúm(m)as*, Akk. Sg. *ḫattusúm(m)enan*, Gen.Sg. *ḫattusummnás*. Andererseits wurde das Flexionsschema von *ḫattusúm(m)as* auf andere Stämme übertragen, die genauso wie *ḫattusúm(m)as* einen Wechsel des Akzentsitzes aufwiesen. Die Wörter für "Hand", "Zeuge" und "Mann" lauteten nach dieser Angleichung wie bezeugt: Nom. Sg. *késsar*, Akk. Sg. *kisséran*, Gen. Sg. *kissrás* bzw. Nom. Sg. *kutruu̯as* und Nom. Pl. *kutruu̯énes*.

In einem letzten Schritt, der erst in historischer Zeit stattfand, wurden auch die drei Stämme auf *-man-* mit festem Akzent, also *isḫimás* "Band", *istámas* "Ohr" und **samas* "Fundament", in einzelnen Belegen an dieses Flexionsmuster angeglichen, so daß die bezeugten Formen wie Akk. Sg. *isḫiménan* ⟨*i*]*š-ḫi-me-na-an*⟩ neben *išḫimánan* oder *saménus* ⟨*ša-me-e-nu-uš*⟩ zustande kamen. Eine fälschliche Übertragung der *é*-Form auf den Instr. liegt in jh. *istaminit* ⟨*iš-ta-mi-ni-it*⟩ neben älterem *istamant(a)* vor, während umgekehrt Herkunftsbezeichnungen auch mit dem Nom. Pl. auf *-úm(m)nes* ⟨ *-u-um-né-eš*, *-um-né-eš*⟩ ohne das erwartete *e* auftreten.

Zusammenfassend läßt sich die Entwicklung also folgendermaßen darstellen: Das Hethitische weist mehrere Typen geschlechtiger *n*-Stämme auf, von denen hier zwei eine sprachhistorische Deutung

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[29] OETTINGER 1982, 171f., unter der leicht abweichenden Annahme, daß auch in den Formen mit Akzent nach der betreffenden Konsonantengruppe der anaptyktische Vokal zunächst eingeführt worden sei und anschließend eine Synkope erfahren hätte. Zweifel bei MELCHERT 1994, 174f., der allerdings die Möglichkeit eines innerparadigmatischen Wechsels des Akzentsitzes nicht in Betracht zieht.
OETTINGER lehnt die Anaptyxe für die Lautgruppe *-mn-* freilich ab, da sie weder in *karimm(a)n-* noch in der Brotbezeichnung *saramm(a)n-* bezeugt sei. Doch handelt es sich bei den Neutra um eine morphologisch abweichende Kategorie, in der die lautlichen Bedingungen für die Anaptyxe nicht gegeben waren. Denn hier wie in anderen *-mm(a)n*-Stämmen ist die Suffixform *-mn-* entweder gar nicht oder erst im 13. Jh. in den N.-A. Sg. eingeführt worden, so daß also die Lautgruppe *-mn-* zum Zeitpunkt der Wirkung der lautgesetzlichen Anaptyxe in diesen Wörtern nicht vorhanden war. Zum Teil handelt es sich überdies um luwische Lehnwörter, die erst spät in das Hethitische übernommen worden sind (dazu vgl. STARKE 1990, 243-299).

[30] MELCHERT 1994, 152f.

erfahren haben. Der erste - durch *ḫắras* repräsentiert - wird gewöhnlich auf den amphikinetischen Flexionstyp zurückgeführt. An dieser Deutung ist festzuhalten, doch muß der Typ um die Wörter für "Band", "Ohr" und "Fundament" erweitert werden. Ihr gemeinsames Merkmal ist in althethitischer Zeit der durchgehende *a*-Vokalismus der Suffixsilbe und der feste Akzent. Der zweite Typ hat entgegen vorherigen Annahmen seinen Ursprung ebenfalls im amphikinetischen bzw. quasi-amphikinetischen Flexionstyp, behält aber den mobilen Akzent. In den starken Kasus (außer dem Nom. Sg.) wird das Suffix durch Einführung der schwundstufigen Form an die schwachen Kasus angeglichen (Akk. Sg. *-umnan*), während der bewegliche Akzent bestehen bleibt. Eine Assimilation von *-umnan* zu ***-umman* in den Herkunftsbezeichnungen findet nicht statt, so daß im folgenden ein anaptyktischer Vokal *e* in die Lautgruppe *-mn-* eingeschoben wird und dieser den Akzent auf sich zieht (*-umḗnan*). Der *e*-Vokal wird zuerst auf andere Wörter mit demselben Wechsel des Akzentsitzes übertragen, dann auf solche, die zwar statischen Akzent aufweisen, aber das Suffix *-man-* enthalten.

Die hier vorgetragene Erklärung besitzt gegenüber den früheren Lösungsversuchen den Vorteil, daß in ihr einerseits die offensichtlich morphologisch bedingte Verteilung von *e* in den starken Kasus und Null in den schwachen Kasus berücksichtigt wird, daß aber andererseits ein aufgrund des Sprachvergleichs wenig überzeugender Rückgriff auf den grundsprachlichen hysterokinetischen Flexionstyp vermieden werden kann.

Korrekturzusatz: In neuerer Zeit hat es den Versuch gegeben, *parš(e)n(a)-* "Ferse" und *piš(e)n(a)-* "Mann" auf ein hysterokinetisches Akzent- und Ablautschema zurückzuführen, vgl. I. BALLES in M. FRITZ & S. ZEILFELDER (eds.): *Novalis Indogermanica. Festschrift für Günter Neumann zum 80. Geburtstag*, 3. Während im Falle des Wortes für "Ferse" das Hethitische den einzigen Zeugen für ein *e*-stufiges Suffix stellt, verweist I. BALLES bei "Mann" auch auf toch. B *pase* "Hase" < **pes-ē + s*, vgl. auch K. T. SCHMIDT, *Sprache* 41, 1999, 12. Leider läßt das tocharische Wort keinerlei Rückschlüsse auf den stammauslautenden Konsonanten zu: eine interne hysterokinetische Ableitung **p(e)s-ḗs* zum proterokinetischen *s*-Stamm **pés-os* (ved. *pásas-*, gr. *πέος* "membrum virile") mit possessiver Funktion für "Rammler, Mann, Männchen" ist lautlich und semantisch ebensogut möglich (freundlicher Hinweis von P. Widmer). Was die hethitischen Wörter betrifft, so ist weder für *parš(e)n(a)-* noch für *piš(e)n(a)-* ein syllabisch geschriebener Nom. Sg. bezeugt (nur ⟨LÚ-*aš*⟩ als Nom. Sg. von "Mann"), so daß der Nachweis eines athematischen Stammes nicht zu führen ist. Sollten hier jedoch tatsächlich *n*-Stämme mit (ur-

sprünglich) hysterokinetischem Ablaut vorliegen, könnte man vermuten, daß diese das Paradigma der von Hause aus amphikinetischen *n*-Stämme in den starken Kasus (außer Nom. Sg.) beeinflußt hätten. Dies wäre nicht unmöglich, aber unerwartet, weil dadurch ein relativ regemäßiges Paradigma mit einem Wechsel *a*/Null zu einem unregelmäßigerem mit einem Wechsel *a*/*e*/Null geworden wäre. Wesentlich einfacher erklärt sich die bestehende Verteilung unter Voraussetzung der oben vorgeschlagenen Entwicklung, wenn nämlich durch die Entstehung des anaptyktischen Vokals *e* die beiden Paradigmen außerhalb des Nom. Sg. ohenehin lautlich zuasammengefallen sind. Ob der Nom. Sg. dann gleichfalls angeglichen wurde (**pisā́s* als Lesung für ⟨LÚ-*aš*⟩) oder die starke Kasusform thematisiert wurde (**pisḗnas* als Lesung für ⟨LÚ-*aš*⟩), muß offen bleiben.

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Indoiranische Komposita und freie Syntagmata mit prädikativischem bzw. partitivischem Attributionsverhältnis der Elemente

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***Inhaltsübersicht*:**

Abteilung 1: Einteilungsprinzipien. Attributionsarten. Möglichkeiten der Anwendung des Begriffes der "prädikativischen Attribution" auf Komposita und auf (zugrundeliegende) außerkompositionelle Attributivsyntagmata

0. Einteilungsprinzipien:

Die Untersuchung der indoiranischen Komposita mit prädikati-vischem bzw. partitivischem Attributionsverhältnis der Glieder vollzieht sich nach verschiedenen Klassifikationskriterien: vom Standpunkt der ***in-***

ternen Syntax (das Verhältnis Vorderglied : Hinterglied), der ***Morphologie*** (Gliedergestaltung, -ablaut/-akzent sowie Kompositionssuffix), der ***Semantik***. Wichtig ist darüberhinaus die ***externe Syntax*** der Komposita, das Auftreten der bereits gebildeten Adjektiva im Satz – innerhalb des Attributionskomplexes bzw. mit unmittelbarem Bezug auf das Satzprädikat als Prädikativa.

Bei der Adnominalisierung der einem Begriff im Rahmen einer Satzaussage zugewiesenen Prädikatsergänzung entstehen Attributionsverhältnisse, die je nach der Art der zugrundeliegenden Prädikation voneinander divergieren. Diese Attributionsverhältnisse treten sowohl in der freien Syntax als auch als interne Gliederbeziehungen in den Komposita mit Nominalhinterglied und Nominal- bzw. Pronominalvorderglied ein (soweit die Komposita ebenfalls ursprüngliche, allerdings komplexere, Prädikatsergänzungen nominalisieren und attribuieren): in Possessivkomposita (PK), Ableitungskomposita (AK) und den wenigen Determinativkomposita (DK).

1. Interne Syntax. Klassifikation der Attributionsverhältnisse in den Komposita und in den freien außerkompositionellen Syntagmata:

Für die ***interne Syntax*** ist die Art des Verhältnisses Vorderglied: Hinterglied relevant.[1] Bei der Beziehung zwischen Adjektiv und Substantiv unterscheiden wir prinzipiell zwei Arten von Attribution: Die erste ist ein ***rein attributivisches Verhältnis,*** weitest aufgefaßt, bei dem dem Bezugswort immanente bzw. auszeichnende Eigenschaften adnominal im Rahmen einer festeren syntagmatischen Verbindung (charakterisiert u.a. durch Kongruenz, relativ starker Junktur mit dem Bezugswort und festerer Wortstellung) zugewiesen werden, ohne hinzukommende prädikativisch(-adverbial)e Konnotation. Andererseits ist in den alten idg. Sprachen ein ***zweiter*** Typus von Attributivkomplexen bezeugt. Diesen Typus hat Ferdinand SOMMER (1928) als "***partitivische***" oder, pointiert, "***prädikativische*** Attribution" bezeichnet.

Grundsätzlich zerfällt die Attribution sowohl in der außerkompositionellen Syntax als auch in den Komposita in folgende große Gruppen:

[1] Mustergültiger Abriß in SCHINDLER 1997: 537-540.

1.1. "***Immanentes***" bzw. "***ornamentales, epithetisches*** Attribut" (cf. SOMMER 1928: 37), vom Typus *der weiße Schnee, der grüne Wald, der schlaue Fuchs, die schöne Helena.* Die Komposita mit derartigem Gliederverhältnis sind typischerweise stehende Beiwörter bzw. *epitheta ornantia.*

Im Vedischen gehören hierher freie Phrasen wie die bekannte indogermanische dichtersprachliche (Teil-)Gleichung[2] ved. *ákṣiti śrávaḥ* : hom. griech. ἄφθιτον κλέος. Dem Ruhmbegriff werden "ornamentierend" weitere stehende Eigenschaften zugewiesen wie der superlative/elative Ordinalausdruck *uttamá-* 'höchst'. Seit dem RV. bezeugt sind die Verbindungen *śrávas- uttamá-* 'der Ruhm [...] der höchste'[3]

RV. 1,91,18cd
āpyā́yamāno amŕ̥tāya soma
diví *śrávāṃsi̯ uttamā́ni* dhiṣva //

Hin(auf)schwellend zu(m) Unsterblichkeit(strank), Soma, leg dir im Himmel Ehren, ganz hohe, an. (cf. GELDNER 1,111: "erwirb dir im Himmel höchsten Ruhm") –

bzw. *ślóka- uttamá-* 'das Lob [...] das höchste' – RV. 10,159,3:

máma putrā́ḥ śatruháṇo
'ₐtho me duhitā́ virā́ṭ /

[2] Phraseologisch eine Vollgleichung, morphologisch – auf den ersten Blick – allerdings eine Teilgleichung: ist doch das Epitheton 'unversieglich' im Ved. kein *-o-* Stamm wie im Griech., sondern ein *-i*-Stamm. Das dem griechischen ἄφθιτον formal entsprechende ved. *ákṣitam* wiederum hat in allen seinen 18 Belegen eine ganz andere phraseologisch-syntagmatische Distribution: es wird nicht mit dem Terminus *śrávas-* kombiniert, zum Unterschied von *ákṣiti-*, welches seinerseits nur auf besagten Phraseologismus eingeschränkt und an den Ruhm-Begriff streng-formulativ gebunden ist. S. dazu die klassische Abhandlung SCHMITT 1967: 61-102 et passim; Überlegungen zu diesem Komplex im Rahmen des Kompositionstypus mit "(Verbal-)Adjektiv" im Hg im Aufsatz SADOVSKI [Salzburg] (s. Bibl.).

[3] Betreffs des zugrundeliegenden Prädikationsverhältnisses cf. die Prädikatsergänzung in RV. 4,31,15:
asmā́kam *uttamáṃ* kr̥dhi
śrávo devéṣu sūri̯ya /
várṣiṣṭhaṃ dyā́m ivopári //
GELDNER 1,460: Unseren Ruhm mach zum obersten bei den Göttern, o Sūrya, zum höchsten wie den Himmel droben.

utā́hám asmi saṃjayā́
pátyau me *ślóka uttamáḥ* //

GELDNER 3,388 (Selbstlob einer Frau): Meine Söhne sind Feindetöter und meine Tochter ist eine Herrscherin, und ich bin die vollständige Siegerin. Bei dem Gatten ist mein Ruf der höchste.

oder, mit einem anderen Ordinalausdruck, *upamá- śrávas-*[4] 'höchster Ruhm'.

Im Bereich der Nominalkomposition entsprechen diesen Syntagmata Bildungen mit dem gleichen ornativen Attributionsverhältnis der Glieder wie TS. 5,7,4,3 *uttamáśloka-*[5] 'höchsten Ruhm habend' und das Epitheton bzw. die zum EN. gewordene Epiklese *upamáśravas-* (RV. 2,23,1a [Superl., vgl. AiGr 2/2,597], 10,33,6a).

Neben diesem Typus *uttamáśloka-/-śravas-* (mit depräverbialem [Superl.-] Adj. im Vg und ornativer Attribution) existiert auch ein Typus mit adverbial(isiert)er Form *uccáis-* bzw. *uccā́°* im Vg "dessen *X* hoch ("oben") ist": cf. AVP. 5,14,1 *uccaiśśloka-* oder in der Mythologie *uccaiḥśravas-*,[6] (u.a. zum Nomen proprium gewordenes) Ep. des bei der Ozeanquirlung geborenen Königs der Rosse (vlt. 'dessen Ruf/Ruhm [N. act. i.S. 'Wiehern'?] hoch/laut ist' bzw. Name des Fürsten der Kurus ['dessen Ruf/Ruhm hoch ist'] im JB 2, 279), resp. RV. 1,116,9 *uccā́budhna-* "dessen Bodenteil nach oben gewandt ist" (vom Brunnen, cf. GELDNER 1,154 bzw. SURYAKANTA 171a), RV. 8,72,10, SV(K). 2,954 *uccā́cakra-* "dessen Rad (nach) oben (gekehrt) ist" (vom Brunnen). Das Verhältnis Hg : Vg bei letzteren Komposita ist (kasuell-)adverbiale Prädikation und entspricht somit vielmehr der prädikativischen denn der ornativen Attributionsart, cf. u. § 1.3.

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[4] RV. 8,80,5c *upamáṃ vājayú śrávaḥ* '(uns bring) höchstengewinnbegierigen Ruhm' (GELDNER; cf. SCHMITT 1967: 73). Darüber hinaus RV. 8,99,2cd: táva śrávāṃsy upamā́n$_i$y ukth$_i$yā̀ / sutéṣ$_u$v indra girvaṇaḥ // GELDNER 2,426 [...] deine höchsten Ruhmestaten sind bei Soma zu preisen, lobbegehrender Indra. Anders RV 1,110,5cd.

[5] In einem speziellen Feueraltarschichtungsmantra (cf. auch ŚB.12,15-18) an alle Götter, darunter Agni und Indra, als eine für den Opferherrn erbetene Eigenschaft (Prädikatsergänzung). – Auflösende oder rekonstruierte Bedeutungsangaben werden im Aufs. in doppelten Anführungszeichen gesetzt, tatsächlich belegte in einfachen.

[6] Seit RVKh 5,14,5; AVŚ. 20,128,15, episch u.a. 8x Mbh.: (N.Sg. 1,18,2c; 1,89,46a; 5,100,12c; 8,5,21a; 9,44,14a; Akk. 1,15,1c; 6,32,27a; 12,226,15c), und klass. (Purāṇa, Kāvya-Literatur, Lex.); in der Poesie Teil verschiedener figurae etymologicae, cf. Kālidāsa, Kum. 2,47. – Weitere (meistens nachbrāhm.) Komposita s. VWC (Index ab initio 175d-176a, 1/2,864c-865a etc. s.vv.).

1.3. "***Prädikativische*** Attribution": Hier werden die "partitiven" und die "orientierenden" Attributivkomplexe subsumiert.

a) Bei den "***partitiven***" Attributivgruppen des Typus *summus mōns* 'die Spitze des Berges' beziehen sich die Adjektivattribute ***auf einen Einzelteil*** der Einheit des Definiendums. Dieser Teil ist jedoch selber eine homogene Einheit mit den Charakteristika des Ganzen: vgl. Hesiod (*Th.* 7-8) ἀκροτάτῳ Ἑλικῶνι χοροὺς ἐνεποιήσαντο / καλούς "am höchsten Teil (*an der Spitze*) des Helikon haben sie [= die Musen] für sich Reigen-(plätze)[9] veranstaltet/angelegt, schön(e)".

b) "partitive" Attributivgruppen mit ***ordinalem, orientierendem*** Charakter. Das Musterbeispiel hierfür liefern Ausdrücke wie *medius collis* 'der mittlere Teil des Hügels' (und nicht etwa "der mittlere Hügel"), bzw. *media nox* als "der *mittlere Teil* der Nacht". Im Iir. gehören hierher eine Reihe von Syntagmata mit urar. **mad*ʰ*i̯a-*. Über die von DELBRÜCK[10] erwähnten Beispiele hinaus – RV. [7,68,7b] *mádhye samudré* 'mitten im Meere', [j]av. *maiδiiōi paitištāne* 'in halber Beinhöhe'[11] – möchte ich weiters[12] anführen: im *Acc. directionis – sam-*

1,4,2 zu den Kleidungsstücken der Rudras und Maruts]), RV. 6,17,11a: *sajóṣās*, bzw. 'einmütig' RV. 1,186,8b, RV. 8,27,5a: *sámanasas*.

Ferner: RV. 5,59,6ab

té *ajyeṣṭhā́ ákaniṣṭhāsa* udbhídó
'*ạmadhyamāso* máhasā ví vāvr̥dhuḥ/
GELDNER 2,67: Ohne Ältesten, ohne Jüngsten, ohne Mittleren, (alle) an der Spitze sind sie in voller Größe ausgewachsen.

Wohlgemerkt sind hier die Negativkomposita keine "Nañ-Tatpuruṣas", sondern Bahuvrīhis mit substantiviertem Adjektiv (ordinaler Bedeutung) im Hinterglied: "(von/unter) denen keiner der Älteste/Jüngste/Mittlere ist", "die keinen (unter sich) als Ältesten/Jüngsten/Mittleren haben". – Zu Bahuvrīhis mit Ordinalnumerale im Hinterglied, insbesondere mit dem einerseits dem *mádhyama-* mit dessen Suffixgestaltung morphologisch, andererseits dem *jyeṣṭhá-* 'ältest' (das GW in seinem Akzentkontrast zu *jyéṣṭha-* 'größt' ist auch für den Suffixalakzent des Kompositums maßgeblich) und *kaniṣṭhá-* 'jüngst' (≠ TS. etc. *kániṣṭha-*) mit ihrer superlativischen Bedeutung semantisch entsprechenden *práthama-*, s. AiGr III, 413-417, spez. 415f., § 209d) und e) mit Anm.

[9] Cf. den Kommentar in der ed. cr. von Martin L. WEST (Oxford 1966 [= 1988]), S. 154f., bzw. Marcel HOFINGER, Lexicon Hesiodeum, Leiden 1978, 201 (s.v. ἐμποιέω) und 709.

[10] Im einschlägigen, knappen Abschnitt über die Adjektiva in ihrem Verhältnis zu Zahlwörtern und Adverbien – DELBRÜCK 1893: 452, § 205; cf. DELBRÜCK 1900: 219, § 93 SOMMER, a.a.O., S. 57.

[11] (BARTHOLOMAE –) WOLFF 366: "bis zur Mitte (der) Bein(höhe)".

udrám [...] *mádhyam* 'mitten ins Meer';[13] im *Loc. inessivus* – RV. 1,69,4: *mádhye* [...] *duroṇé*; 1,105,11: *mádhye* [...] *āródhane divás*.[14] Cf. jav. (N. 47) *haca. hū. vaxšāṯ. maiδiiāi. fraiiarāi.* 'vom Sonnenaufgang bis zur Mitte des Vormittags'. Ein mögliches Pendant des lat. *media- noct-* in der prädikativischen Funktion ist (nachr̥g)ved. *madhyamā́- rā́trī-*: zu Syntagma und Komposita s. Abt. 2B.[15] Diesem entspricht der prädikativische Gebrauch von *pū́rva-* im Acc. temp. *pū́rvām rā́trim* 'am Anfang der Nacht'.[16]

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[12] Zum Kompositum *maiδiiōi.paitištāna-*, das mit dem Synt. *maiδiiōi paitištāne* zusammenhängt, s. Abt. 2 B.

[13] RV. 7,88,3:
ā́ yád ruhā́va váruṇaś ca nā́vam
prá yát samudrám īráyāva mádhyam /
ádhi yád apā́ṃ s_anúbhiś cárāva
prá preṅkhá īṅkhayāvahai śubhé kám //
GOTŌ 2000: 152: Wenn [ich] und Varuṇa das Schiff besteigen wollen/werden, wenn wir [es] in das mittlere Meer (in die Mitte des Meeres) hin vorwärts treiben wollen/werden, wollen/werden wir uns in der Schaukel schaukeln zum Schönsein (zum Prangen).
– GELDNER 2,259: "wenn wir mitten ins Meer hinaussteuern [...]".
Zu den mythologischen Hintergründen vgl. den Kommentar von GOTŌ 2000: 152-153 sowie die Noten von GELDNER 2,259-260. – Wenn es im Mythos um die nächtliche Sonne geht, dürfte dem sonst freilich (mit KLAUS 1989: 364-371) eher als 'Zusammenfluß' im Sinne von 'Strom (Indus etc.)' übersetzbaren Komplexivkompositums *samudrá-* (s. dazu unten, Abt. 2 A, § 1a(1), Fn. 36) eine Bedeutung 'Meer' insbesondere in der Mythologie der Vasiṣṭha-Hymnen (sich den Beobachtungen von LÜDERS 1951: 104 zu 5,85,6 gesellend) in Frage kommen.

[14] Hierher auch das auf das im Sinne eines Abl. separationis verwendete Pronominaladverb *tátas* (scl. *kumbhā́t*) RV. 7,33,13: *táto* ha mā́na úd iyāya *mádhyāt*, táto jātám ŕ̥ṣim āhur vásiṣṭham 'daraus [aus dessen Mitte] ist Māna hervorgegangen, daraus, sagt man, sei der R̥ṣi V. geboren'. *mádhyāt* hier eher lexikalisiert bzw. kunstvoll-pleonastisch.

[15] Begriffe wie "der mittlere Teil der Nacht", ved. *madhyamā́ rā́trī*, bestehen selber aus einzelnen Elementen, weshalb der entsprechende Ausdruck auf Griechisch gar pluralisch-komprehensiv ist – *μέσαι νύκτες* 'Mitternacht' bei Sappho.

[16] AVŚ 16,7,8-10: idám ahám āmuṣyāyaṇè3 'múṣyāḥ putré duṣvápnyaṃ mr̥je // yád adóado ⁺abhyágachaṃ (Mss. abhyágachan) yád doṣā́ yát *pū́rvāṃ rā́trim* // yáj jā́grad yát suptó yád dívā yán náktam // WHITNEY - LANMAN 2, 800: '8. Now (*idám*) do I wipe off evil-dreaming on him of such-and-such lineage, son of such-and-such a mother 9. What I went (nach Mss.: 3. Pl. verallgemeinernd: *was man*...) on such-and-such an occasion, what at evening, what *in early night*; 10. What when awake, what when asleep, what by day, what by night [...]'.

Mythologem[19] explizit erwähnt ist und es etwa keine sechs Erden gibt. Die Erden als die drei "unten" (befindlichen) werden also vermittels des *prädikativischen Attributs* genauso wie 3,56,2 den Himmeln *oben* (dazu s.u. RV 3,56,8) gegenübergestellt.[20] Somit hat das prädikativische Attribut eine ähnliche Funktion wie das adnominal verwendete Adverb dyā́m iv*opári* 'den Himmel droben' (RV. 4,31,15).

c) Darüber hinaus möchte ich die ***Totalitätsadjektiva*** wie gr. πᾶς oder ai. *víśva-*, *sárva-* hierzu rechnen, soweit sie nicht ***distributiv*** im Sinne 'jeder, quisque' oder ***komprehensiv***, i.S. 'alle' verwendet werden, sondern im ***prädikativischen*** Sinne 'ganz': vgl. jav. *tanuuō vīspaiiā̊ druuatāt-* 'Gesundheit des ***ganzen*** Leibes' (Beispiele wie Yt. 16,7 oder, aus dem Kompositabereich, Y. 9,17, s.u. im § 2.1. der Abt. 2 A): Es ist – besonders im Falle der Ordinalausdrücke – ja entscheidend, ob "das mittlere Objekt X" oder "die Mitte des Objektes X" gemeint wird, ob "jeder/aller Leib" oder "der ganze Leib". In vielen Fällen läßt sich die genaue Bestimmung erst im Zuge einer Untersuchung der textuellen Hintergründe erschließen und sogar in den qualitativen Veda-Übersetzungen werden entsprechende Komposita auf Schritt und Tritt (s. ausführlich Abteilung 2) falsch wiedergegeben.

d) Die prädikativische Attribution ist weiters für eine ganze Reihe von Bildungen charakteristisch, deren morphologische Zugehörig-

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[19] Stellen aus verschiedenen Traditionen der Brāhmaṇa-Prosa bei KLAUS 1986: 41-43.

[20] RV. 3,56,2:

ṣáḍ bhārā́ṁ éko ácaran bibhart$_i$y
ṛtám̥ várṣiṣṭham úpa gā́va ā́guḥ /
tisró mahī́r úparās tasthur átyā
gúhā d$_u$vé níhite dárś$_i$y ékā //
GELDNER 1,403: Sechs Lasten trägt die Eine ohne zu gehen. Zur höchsten Ordnung sind die Kühe gekommen. Drei Erden stehen unten [..., s. Komm.-Noten zur Strophe]; zwei sind verborgen, eine ist sichtbar.

RV. 3,56,8:

trír *uttamā́* dūṇáśā *rocanā́ni*
tráyo rājant$_i$y ásurasya vīrā́ḥ /
ṛtā́vāna iṣirā́ dūḷábhāsas
trír ā́ divó vidáthe santu devā́ḥ //
Dreifach sind die höchsten, schwer erreichbaren Lichthimmel. Drei Mannen des Asura sind Herrscher. Die gesetzestreuen, eifrigen, schwer zu hintergehenden Götter sollen dreimal des Tages bei dem Opfer zugegen sein.

Angesichts der Parallele in der Strophe 2 wäre eine Alternative "Dreifach sind die schwer zu erreichenden Himmel zuoberst" nicht undenkbar. Dabei wird *uttamā́* als prädikativisches und nicht als ornatives Attribut aufzufassen sein. Vgl. das adnominale Adv. *upári* in RV. 4,31,15 dyā́m iv*opári* 'den Himmel droben'.

Die vier aufgezählten Gruppen (und einige weiteren, wie z.B. Zeitadjektiva vom Typ 'morgendlich' etc., Quantitätsadjektiva wie 'voll', 'halb', Quantitätszahlwörter [Cardinalia] etc.) bilden eine Art "natürliche Klasse", mit gemeinsamen Verhaltenszügen insbesondere in der Flexion (im Iir. verhalten sie sich teilw. wie Pronominalia);[23] andererseits weisen alle diese Adj. in der *externen Syntax* überzufällig einen *prädikativischen Bezug* auf die Gesamtaussage auf (s. Abt. 1, § 4).

2. *Morphologisch* sind die Komposita nach der Gestaltung von Vorderglied, Hinterglied und Kompositionssuffix zu unterscheiden:

2.1. Das *Vorderglied* kann eine Stammform oder aber explizite Kasusflexion (eventuell in adverbialer/adverbialisierter Form) aufweisen:

a) Vg in der Stammform. Dies ist bei den PK, den AK und den wenigen DK die unmarkierte Vg-Gestalt.

b) Vg in kasueller/adverbieller Form (SADOVSKI [Salzburg]). Dieser Subtyp besteht bei den iir. Bahuvrīhis aus den Formationen:

– mit Lokativ-Adverb: etwa jav. ***agraēraθa-***, EN. Yt. 13,131, 9,18; 9,22; 19,77 (s. DUCHESNE-GUILLEMIN 1936: 32; 194); cf. ved. *agre*-Komposita sowie ved. *puróratha-* "dessen Wagen vorne ist").

– mit Instr.-Adv.: Typ *uccaiḥśravas-/uccā́budhna-*, s. o. § 1.1. Zu adverbialisierten alten Adj.-Komposita als Vg in Großkomposita vgl. *nīcā́vayas-* 'deren Kraft nach unten geneigt/gesunken (*nīcā́*) ist' im Zitat von RV. 1,32,9 o. mit der adverbiell-kasueller Form einer "*-añc-*"Bildung.

– Weitere Adv., u.a. *-tás*-Adverbien (in lokaler Funktion im allg. Sinne [s. Abt. 2 B. II]): RV. 10,81,3 *viśvátobāhu-* "dessen Arme überallhin (gerichtet) sind"; Abl. separationis etc.

– Akk.-Adv. (außer in PK. > VRK) bei DUCHESNE-GUILLEMIN 1936:32.

2.2. Die Anwesenheit oder Abwesenheit eines Kompositionssuffixes wird durch morphologische Prüfung der Gestalt des Hinterglieds im

[23] Zu den Flexionsbesonderheiten s. die entsprechenden Abschnitte von AiGr 3 u. HOFFMANN/FORSSMAN 1996.

Vergleich zu seinem Grundwort (GW) festgestellt.[24] Diese Spezialproblematik haben wir in extenso in SADOVSKI 2000 und 2001 besprochen und kommentieren sie deshalb hier nicht. Die Substantivierung eines Adjektivs (v.a. im Neutrum) kann als Ableitungsbasis von Komposita und Simplicia dienen: so – etwa mit einem Ordinalausdruck im Hg und Vg Y – in Komposita auf *-pūrva-* "dessen Erstes [räumlich, zeitlich, übertr.] Y ist" (*á-pūrvya-*, adj. [RV.+], *a-pūrvá-* "kein Erstes/Präzedent habend" [AV.: *-eṇa*], ŚB.+, m.: PB+; cf. Pāṇ. 8,3,17), *-agra-* 'dessen Höchstes/Spitze Y ist', etc.

3. Die gesamte Palette der Attributionsverhältnisse *in Komposita* wie auch in außerkompositioneller Syntax weisen folgende ***semantische Gruppen*** auf:

A. Pronominaladjektiva der Totalität: mit der Bedeutung der Gesamtbildung distributiv-attributivisch ("der *jedes* X hat/macht"), komprehensiv ("der alle X hat/macht"), prädikativ-attributivisch (der *das ganze* X hat/macht) bzw. kasuell "dessen X *von/für etc. jeden* ist" (mit zugrundeliegender Prädikatsergänzung in Kasusform) oder adverbiell ("dessen X *überall* ist"). – Im Indoiranischen gehören hierher ved. *víśva-* (als Vg *viśvá-*) und *sárva-*[25], av. *vīspa-* und *hauruua-*.

B. Ordinalausdrücke: Adjektiva und Numeralia (Ordinalia) wie *pū́rva-/pūrvá-/pūrva-*, *mádhya-/madhya-*, *ágra-*, *uttamá-*, *upamá-* usw. Das Gliederverhältnis (bei einem Hg *X*) ist entweder ***rein attributivisch***: "das erste/mittlere/letzte/höchste/unterste etc. X habend" oder ***prädikativisch-attributiv*** "den Beginn/die Mitte/den Schluß/den Ober-/Unterteil von X umfassend".

C. Quantitätsausdrücke: Adjektiva, Pronomina und Numeralia (cardinalia), cf. o., § 1.3.

D. Identifizierungsadjektiva der Art von av. *hama-*, gr. *ὁμο-*, ved. (deriviert) *sāmāná-* 'gleich' bzw. 'gleichartig, homogen etc.', prä-

[24] Eine Suffigierung ist explizit nachzuweisen nur wenn ein nicht°e/o-thematisches GW im Kompositum um *°*o-* oder *-*(i)i̯o-* erweitert auftritt, bzw. wenn bei einem *°e/o*-thematischen GW, neben dem kein Simplex auf *-*(i)i̯o-* besteht, das Kompositum ein *-*(i)i̯o*-Suffix aufweist. Bei *-e/o*-themat. GW, die als Hg unverändert vorkommen, ist zunächst unklar, ob Suffixsubstitution oder Übernahme des fertigen GW.s stattgefunden hat; dort ist das *Akzentuierungskriterium* anzuwenden.

[25] S. u.a. BRUGMANN 1894. Seit AV Vorderglied z.T. mit der analogischen Umbetonung *sarvá-*.

dikativisch: 'der gleiche', 'einundderselbe (wie X)', 'identisch' bzw., fast adverbiell, 'selbst': cf. *αὐτός*.[26]

4. Externe Syntax: Für die alten idg. Sprachen, darunter Ind., Gr.[27], Lat., Slav. usw., ist der Gebrauch von mit dem Subjekt kongruierenden prädikativischen Attributen, etwa aus Raum- bzw. Zeitadjektiven, im Sinne von *Umstandsbestimmungen der Gesamtsatzaussage* geläufig, also praktisch als *Adverbialia*. Als solche Prädikativa werden außer den im § 1.3. bzw. 3. oben aufgelisteten *Simplicia* charakteristischerweise auch die Mesonyktios- und Bahuvrīhi-*Komposita* mit Zeit- oder Raumbegriffen im Hg verwendet. Ausführlicher über die Mesonyktios-, PK.- bzw. die *ubhayadyúṣ/ubhayedyúṣ*-Bildungen bei SADOVSKI [Salzburg]. Muster *Od.* 12, 429-430: *παννύχιος φερόμην, ἅμα δ'ἠελίωι ἀνιόντι / ἦλθον* 'Die ganze Nacht lang (als ein Ganznächtlicher) zog ich (umher); mit dem Sonnenaufgang kam ich'.[28]

Ferner können Wörter dieser Klasse in besagter Verwendung dann in einer bestimmten Kasus-, Genus- und Numerusform erstarren, so v.a. im N. Sg. M. (hierzu BRUGMANN, IF. 27, 1910, 233-278), und so bereits unabhängig von der Zahl bzw. dem Geschlecht der Subjekte rein adverbiell erscheinen: bekannt ved. *nakiṣ*, eig. Nom. Sing. Mask. des Negativpronomens, das wie das lat. umg. 'nullus' als Satznegation gebraucht wird, doch in einem weiteren Schritt sich bereits auch auf nichtmaskulinische und besonders auch auf pluralische Subjekte beziehen kann.

Die Attribution, darunter die prädikativische Art, tritt besonders prägnant in der Nominalkomposition ein. Hier folgt ein erster Versuch, vermittels dieser aus praktischen Gründen ausgewählten Klassifikationsmethode auch die einschlägigen Verhältnisse ***in den Komposita*** schärfer zu untersuchen. Die Problematisierung der prädikativischen Attribution

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[26] Zu *αὐτός* im Vorderglied vgl. SCHULZE 1966: 835 über *αὐτῆμαρ*, Od. 3,322 *αὐτόετες*, zugleich Bsp. für den datierenden (und nicht extensivierenden) Akk., der dann vom Dat. verdrängt wird. – Beide letzte Gruppen C und D sind Gegenstand einer anderen Abhandlung.

[27] Außer den Bsp. SADOVSKI 2004 s. Il. 24,10ff.: *ἄλλοτ' ἐπὶ πλευρὰς κατακείμενος, ἄλλοτε δ'αὖτε / ὕπτιος, ἄλλοτε δὲ πρηνής, τότε δ'ὄρθος ἀναστάς* (WACKERNAGEL 1924:66). Ferner Supr. 70a16-22: 234,7 šestĭ voinŭ piuniga nošaaxą *strĭmoglavĭ* 'sechs Krieger trugen P. kopfüber (*praeceps*/*κατὰ κεφαλῆς*)'.

[28] Ausführlich SADOVSKI [Salzburg]; Alain CHRISTOL, LALIES 10, 1988-1989, 345 ff.

hilft insbesondere bei der stärkeren Differenzierung der Bahuvrīhis und der sog. RISCH-Komposita, für die die bisher aufgezählten Adjektivklassen jeweils charakteristische Vorderglieder sind.

Abteilung 2: Bahuvrīhi-Komposita, desyntagmatische "Ableitungskomposita" (RISCH-Hypostasen) und die ihnen entsprechenden freien Phrasen

A. Pronominaladjektiva der Totalität im Vorderglied: Komposita mit Vorderglied *viśvá-* bzw. *vīspa-* im Veda und Avesta

Bei dieser ersten Gruppe wird das Vorderglied von **Pronominaladjektiva der Totalität** gebildet: Die Formationen sind überwiegend ohne *°*o*- oder *-*(i)i̯o*-Erweiterung und weisen Akzentuierung und Semantik der Bahuvrīhis auf. Bildungen mit nachweislichem Kompositionssuffix *-*(i)i̯o*- (wobei die Ableitungsbasis kein *-*(i)i̯o*-Stamm ist) sind selten; im RV stehen sie oft neben kompositionssuffixlosen Pendants, so Paare *viśvádeva-* vs. *viśvádevi̯ya-* (zu letzterem neuerdings KORN 2000: 233-234); (≠ *viśvádevi̯yāvant-* 'von den Viśve Devā́s begleitet'). In *viśvávāri̯ya-* (vs. *viśvávāra-*) kann das im Nt. substantivierte *vā́ri̯ya-* 'das Wünschenswerte' als GW eines von *viśvávāra-* unabhängigen Bahuvrīhi gedient haben. Mit dem Vg *viśvá-* begegnen im RV. über 70 Zusammensetzungen. In der Mehrheit der Fälle ist das Vg in der Stammform:

1. Rein attributives Verhältnis:

a) ***Komprehensiv***-attributivisches Verhältnis zwischen Vg und Hinterglied ("mit 'omnēs' X-s versehen[d]") weist eine größere Gruppe von Zusammensetzungen auf:

(1) *viśvábheṣaja-* "der *alle* Arzneien/Heilmittel hat/bietet" bezieht sich RV. 10,60,12 auf die Hand bei einem Segen durch Handauflegung:

ayám me hásto bhágavān
ayám me bhágavattaraḥ /
ayám me *viśvábheṣajo*
'ₐyáṃ śivā́bhimarśanaḥ //

Diese meine Hand da ist eine, die (Glücks)anteil *verschafft* / glückbringend[29], diese meine da (noch) glückbringender. Diese meine (Hand) da ist eine, die alle Arzneien bietet, diese da eine, deren Berührung günstig ist.

Der syntaktische Parallelismus der vier paarweise antithetisch zusammenhängenden Pādas führt zu einem Gradationseffekt: Mit den ersten beiden Adjektiven wird ein Sachverhalt geschildert (die linke Hand wird hier euphemistisch, entgegen der im menschlichen Bereich befürchteten Negativsymbolik als glücksbringend bezeichnet, etwa tabuistisch bzw. aufgrund des Vollzugs einer sakralen Handlung;[30] demgemäß ist die grundsätzlich positive rechte Seite [noch] segensreicher), der durch das zweite Paar zu einem gewissen Grade expliziert wird. Dem einen Inhalt entspricht *viśvábheṣaja-*, dem anderen *śivā́bhimarśana-*. Dabei bleibt zunächst offen, ob die Entsprechung parallel ist (*a* : *c*, *bhágavān* = *viśvábheṣajaḥ*, bzw. *b* : *d*, *bhágavattaraḥ* = *śivā́bhimarṣana-*), oder eher chiastisch (*a* : *d*, *bhágavān* = *śivā́bhimarṣana-* bzw. *b* : *c*, *bhágavattaraḥ* = *viśvábheṣajaḥ*). Wenn die Beziehung der Bedeutung "der *alle* Arzneien/Heilmittel hat/bietet" gegenüber "dessen Berührung günstig ist" für eine Art Superiorität der ersteren spricht, und wenn das Adj. *śivá-* 'günstig' so gebraucht wird wie etwa gr. ἀριστερά,[31] würde die zweite Möglichkeit zu bevorzugen sein.

(2) Bezeugt ist auch die feminine Wortform des Adj., *viśvábheṣajīḥ*,[32] in Kongruenz mit *ā́pas* – RV. 1,23,20:

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[29] GELDNER 2,225: "Diese meine Hand ist glücklich, diese ist noch glücklicher; diese meine (Hand) ist allheilend, diese ist von heilsamer Berührung". – Besser: "eine, die (Glücks)anteil verschafft", 'glückbringend', als faktitivisches Possessivadjektiv.

[30] So beschaffen sind prinzipiell die Hände bzw. beiden Seiten einer Gottheit – sowohl die linke als auch die rechte ist heilvoll, cf. z.B. die Schilderung Indras in RV. 8,33,5:

yáḥ *suṣavyáḥ sudákṣiṇa*
inó yáḥ sukrátur gr̥ṇé /
yá ākaráḥ sahásrā yáḥ śatā́magha
índro yáḥ pūrbhíd āritáḥ //

GELDNER 2,345: Der eine gute Linke, eine gute Rechte hat, der als Gewaltiger, Ratreicher gepriesen wird, der Tausende ausgibt, der Hunderte verschenkt, Indra, der als Burgenbrecher anerkannt ist.

[31] Der Komparativ *bhágavattara-* dürfte hier kaum eine dem gr. ἀριστερά analogische Verwendung aufweisen; im ersten Fall wird ein tatsächlicher Vergleich vorliegen, im zweiten eher eine Art elativischer Gebrauch 'sehr gut', ohne Aufstufung gegenüber der Güte der rechten Hand.

[32] Devī-Fem. unter dem Einfluß des *-ī́*-Simplex, dem fem. Nom. agentis *bheṣajī́-*, s. AiGr 2/2,381, § 246g), Anm. (auch wenn umgestaltet, trotzdem immerhin Bahuvrīhi!) bzw. AiGr 2/2,404, § 250g)γ (ebenda auch zum *-ī́*-Fem. des PK. mit Adverbial-Vg aus Totalitätsbegriff *viśvā́habheṣaja-* 'dessen Arzneien überall sind').

apsú me sómo abravīd
antár *víśvāni bheṣajā́* | =10,9,6b
agním ca *viśváśambhuvam*
ā́paś ca *viśvábheṣajīḥ* //

Kommentar s. im folgenden. – GELDNER 1,23: Soma belehrte mich [Fn. 3: Als eine Eingebung], daß in den Wassern alle Arzeneien und der allerersprießliche Agni sei, und daß die Wasser allheilend sind.

Die Heilmittel befinden sich nach der verbreiteten r̥g- und atharvavedischen Vorstellung[33] in den (im Veda mit universaler magisch-kosmischer[34] Funktion beladenen) Flüssen[35] und Bergen.

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[33] RV. 10,137; AV 7,86,1-3 etc, s.u. – Im Av. liegt ein Kompositum ähnlicher Semantik mit WN im Hg vor: der Name eines Wunderbaumes Yt. 12,17 *vīspō.biš-* 'qui a tous les remedes' (cf. DUCHESNE-GUILLEMIN 1936: 71, 164).

[34] Cf. u.a. RV. 3,1,6:
vavrā́jā sīm ánadatīr ádabdhā
divó yahvī́r ávasānā ánagnāḥ /
sánā átra yuvatáyaḥ *sáyonīr*
ékam *gárbham* dadhire saptá vā́ṇīḥ //
GELDNER 1,333: Er ging in sie ein, die nicht essen und nicht Schaden leiden, in die jüngsten Töchter des Himmels, die sich nicht kleiden und auch nicht nackt sind. Dort haben die Alten, die (immer) jugendlich sind, die einen gemeinsamen Schoß haben, den einen Keim empfangen, die sieben Stimmen.
Nach GELDNERs Komm.-N. ad 6 ist hier Agni als Leibesfrucht der Gewässer gemeint; die sieben Stimmen sind nach Sāy. (s. auch Komm.-N. ad 6d) die Flüsse. Das Kompositum *sáyoni-* (SADOVSKI 2001: 113, § 5: "*ein und den selben* Mutterleib (als Ursprungsort) habend") ist hier, wie sonst im RV. bzw. wie im gr. ἀδελφεός üblich, als "die einen gemeinsamen Schoß (als Ursprungsort) haben", "die einem gemeinsamen Schoß entspringen" wiederzugeben. – Die dem ἀδελφεός entsprechende Bildung kommt interessanterweise RV. 3,1,6 neben *gárbha-* 'Embryo' vor, welches wurzelmäßig dem Grund wort von ἀδελφεός korrespondiert, im Teilsatz "*sáyonīr* ékaṃ *gárbham* dadhire". Cf. zu einer periphrastisch-katalytischen Entsprechung von *sáyoni-* RV. 1,144,3-4: yám īm d_uvā́ *sávayasā saparyátaḥ, samāné, yónā* mithunā́ *sámokasā* /.

[35] Oft von den Flüßen Pañjābs, speziell dem Indus, cf. auch 10,137,2: d_uvā́v imáu vā́tau vāta, ā́ *síndhor* ā́ parāvátaḥ / dákṣam te anyá ā́ vātu, párānyó vātu yád rápaḥ // 'Diese beiden Winde da [besser präd.-attr.: *zwei Arten* Wind, da es um den gleichen Wind geht; cf. GELDNER 3,370, Komm.-N. ad 2cd] wehen, von Sindhu her, in der/die Ferne. Kraft soll dir der eine herbeiwehen, fort soll der andere (das) wehen, was Gebrechen/Gebreste/Gebrechlichkeit ist.

RV. 8,20,25-26:
yát síndhau yád ásiknᵢyām
yát samudréṣu marutaḥ subarhiṣaḥ /
yát párvateṣu bheṣajám //

GELDNER 2,325: Welches Heilmittel in der Sindhu, welches in der Asiknī, welches in den Meeren[36], ihr Marut mit schönem Barhis, welches in den Bergen, [...][37]

Deswegen tritt auch der vom Indus kommende feuchte Wind als Träger der gleichen Eigenschaft entsprechend mit demselben Epitheton auf:

RV. 10,137,3:
ā́ vāta vāhi bheṣajám, ví vāta vāhi yád rápaḥ /
tᵤvám hí *viśvábheṣajo*, devā́nām dūtá ī́yase //[38]

GELDNER 3,370: Wind, wehe das Heilmittel her! Wind, wehe das Geberste fort, denn du, der Allheiler, gehst als der Götter Bote!

Im zit. Text RV. 1,23,20 tritt eine bemerkenswerte Paraphrase ein: Die erste Halbstrophe *apsú [...] antár víśvāni bheṣajā́* (+ santi) "drinnen in den Wassern sind alle Arzneien" stellt praktisch eine typi-

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[36] Besser: 'in den Zusammenfluten', da in der Mehrheit der anderen Fällen die (Fünf/Sieben) Flüsse gemeint zu sein scheinen. Zur häufigen Irreführung durch die Übersetzung von *samudrá-*, eig. "Zusammenwasserheit" (SADOVSKI 2000: 461 und 467, § 1.2.1.1.2.), mit 'Meer' oder gar 'Ozean' an Stellen, wo vielmehr der Indus-Zusammenfluß gemeint ist, s. KLAUS 1989: 364 ff. bzw. 1989 [1990]: 26; cf. mit weiterer Lit. EWAia. 2,705.

[37] Die Fortsetzung in der Strophe 26 eignet sich zugleich als Illustration der hier im § 2.1. der Abt. 2 A besprochenen dichtersprachlichen Elemente:
víśvam páśyanto *bibhr̥thā* tanū́ṣᵤv ā́
ténā no ádhi vocata /
kṣamā́ rápo maruta ā́turasya na
íṣkartā víhrutam púnaḥ //
All das erspähend bringet ihr an euren Leibern mit; mit dem segnet uns! Zu Boden (gehe) das Gebreste unseres Kranken, ihr Marut! Bringet alles, was verrenkt ist, wieder zurecht!

[38] In seinen magisch-heilsamen *uerba concepta* RV. 10,137,4, die die Anwendung der Arzneien wirksam machen sollen, beruft sich der Heiler demgemäß auf die in der Vorstrophe vorausgeschickten Omnipotenz der Urheilmittel: ā́ tvāgamam śámtātibhir, átho ariṣṭátātibhiḥ / dákṣam te bhadrám ā́bhārṣam, párā yákṣmam suvāmi te // 'Herbei zu dir bin ich gekommen, mit Heilsamkeiten (Heilmitteln) und mit Unversehrtheiten (GELDNER: Gesundheitsmitteln). Kraft habe ich dir gebracht, heilvolle, fort treibe ich (von) dir die Auszehrung'.

Mit den so[40] beschriebenen Arzneien bieten die Wasser eine Art ***Panazee***. Das legen Str. wie RV. 10,137,6 nahe: Pāda *c* heißt es *ā́paḥ sárvasya bheṣajī́s* 'die Wasser sind die Heilerinnen von allem'. In diesem Abschnitt aus dem X. Maṇḍala ist der Gen. obiectiuus zum N. agentis *bheṣajī́-* bereits nicht *víśva-*, sondern das Totalitätspronomen *sárva-* 'totus'. Dies deutet darauf hin, daß hier der Akzent eher auf *alle* Arzneien insgesamt und nicht auf jede einzelne gelegt wird:

ā́pa íd vā́ u bheṣajī́r
ā́po amīvacā́tanīḥ /
ā́paḥ sárvasya bheṣajī́s
tā́s te kr̥ṇvantu bheṣajám //

GELDNER 3,370: Die Wasser sind fürwahr die Heilenden, die Wasser die Krankheitsvertreibenden. Die Wasser heilen alles; die sollen dir ein Heilmittel bereiten![41]

b) *distributiv*-attributivisch: Formel "jeden, jeden einzelnen X habend/ umfassend, mit jedem X versehen(d)":

In den Krankheitsbeschwörungen in beiden AV-Versionen – AVŚ. 9,8,6 mit deren Parallele AVP 11,3,10; 19,34,10 resp. AVP 1,32,5 – ist *viśváśārada-* 'jedes Jahr immer wiederkehrend', also PK. "jedes Jahr[42] (als Zeitraum) habend", ein Epitheton des Fiebers (*takmán-*). Die Bedeutung hier ist wiederholend-distributiv: das Fieber rekurriert ja chronisch *jedes* Jahr nach der Regenperiode, und nicht das ganze Jahr:

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[40] Das höchst kunstvolle Stück RV. 1,23,20 zeichnet sich durch mehrere stilistische Figuren aus. Hierzu zählt der anagrammatische Stabreim – jedes erste Wort beginnt mit *a-*. Daneben ist aber in drei der vier Verse auch jedes letzte Kolon stabreimend gebaut, wobei einerseits das Element *viśva°* dreifach wiederkehrt, andererseits jede der darauffolgenden Komponenten mit *bh-* anlautet. Dazu kommt die Rahmenkonstruktion mit dem Wasserwort in zwei verschiedenen Kasus (der Art des Polyptotons, hier vielmehr eines Diptotons).

[41] Die tiefe Verbindung der angeführten Vorstellungen miteinander zeigt sich daran, daß diese Strophe im sonst ähnlichen magischen Hymnus AV. 4,13 (s. GELDNER ib.) durch die Handauflegungsstrophe 10,60,12 ersetzt wird.

[42] Bekannt ist das Kompositum *śatáśārada-* 'hundert Jahre lebend'. Das Hg hängt mit dem Herbstwort zusammen und ist substantivierte Vr̥ddhi-Ableitung *śārada-*, "das mit dem Herbst *śarád-* Verbundene/Charakterisierte/nach H. Gezählte", 'Jahr'. Die Komposita beziehen sich also nicht auf den Herbst, sondern auf das Jahr.

AVŚ 19,34,10:
ā́śarīkaṃ víśarīkaṃ
balā́saṃ pṛṣṭyāmayám /
takmā́naṃ *viśvá́śāradam*
arasā́ṃ jaṅgidás karat //10//

AVP 11,3,10:
aśarīkaṃ viśarīkaṃ
balāsaṃ puṣṭyāmayaṃ
takmānaṃ *viśvaśāradam* (v.l.: tajmānaṃ etc.)
arasañ jaṅgiḍas karat

Cf. WHITNEY - LANMAN 1905: 2,953 ad AVŚ 19,34 (Beschwörung mit einem Amulett aus *jaṅgiḍa*-Baumholz: zum Schutz usw.), Str. 10: The crusher, the burster, the *balā́sa*, the side-ache, the *takmán* of every autumn, may the *jaṅgiḍá*-make sapless [zum Lexikalischen s. ib., Komm.-Note zu 10].

AVŚ 9,8,6:
yásya bhīmáḥ pratīkāśá
udvepáyati pū́ruṣam /
takmānaṃ *viśvá́śāradaṃ*
bahír nír mantrayāmahe //6//[43]

Gegen verschiedene Krankheiten. – WHITNEY - LANMAN 1905: 2,550: Of whom the fearful aspect makes the man tremble - the *takmán* of every autumn we expel out [of thee] by incantation.

Zum Inhaltlichen cf. einerseits WHITNEY - LANMAN 1905: 2,550, Komm.-N. ad 6, und SADOVSKI [Salzburg] über die u.a. wegen seiner (externen Syntax der [zeitlichen]) Prädikativa wie *ubhaye-/ubhayadyúṣ* etc. interessanten *Fiebergebete* beider AV-Traditionen, darunter AVŚ 5,22 (bes. 10.13). Relevant auch AVP 1,32,5:

tṛtīyakaṃ vitṛtīyaṃ
sadandim uta hāyanam /
takmānaṃ *viśvaśāradaṃ*
graiṣmaṃ nāśaya vārṣikam //

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[43] AVP hat *pauruṣam* in *b*, und für *c* und *d*: *takmānaṃ śītaṃ rūraṃ ca / taṃ tve nir mantrayāmahe* 'das Fieber, das kalte und das brennende, dieses beschwören wir (durch Formeln) heraus.

> [...] das mit dem dritten Tage verbundene, das ein Drittel (= den dritten Tag der Dreitagsperiode) auslassende[44], das *sempiterne*[45], das Fieber, das jeden Herbst/ jedes Jahr (da) ist, das mit (je)dem Sommer verbunden ist, laß verschwinden, das mit (je)dem/r Regen(ssaison) verbunden ist. Cf. auch ZEHNDER 1993 ad loc.

Die teils parallele Strophe des Śaunaka ändert insofern die Perspektive, als anstelle von AVP 1,32,5*bc sadandim uta hāyanam / takmānaṃ* ***viśvaśāradaṃ*** die Verse *bc sadandím utá* ***śāradám*** */ takmā́naṃ śītáṃ rūráṃ [ca]* den Akzent auf die saisonmäßige Distribution des Fiebers *innerhalb des Jahreskreises* verschieben, also nicht über die Jahresperiode hinweg setzen.

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[44] Als Parallele s. ein aškun kati *nutr-* 'vorgestern' zugrundeliegendes Entheos-PK. *anu-tr̥tīyam* "einen/den dritten (Tag) dahinten / hinter sich habend" (als PRK würde es heißen "nach einem dritten [Tag] seiend", was aber bei einer normalen Tageszählung unerwünschterweise eine Bedeutung *"nach dem dritten [Tag]", also *'übermorgen' gehabt hätte und nur bei einer rückläufigen Zählung einen Sinn 'vorgestern' hätte), cf. TURNER 318, 5912, EWAia. 1,664. – *vi-tr̥tīya-* könnte einerseits "bei dem der/das Dritte (der dritte [Tag]) bzw. die Dreiheit (der Komplex dreier [Tage]?) *aus* ist" bedeuten, cf. AiGr 3,414, § 209: und vgl. *ibid.*, 416-417, § 210 [also kaum: "der das Dritte / den dritten (Tag) *durch* hat / *durch*macht (= übersteht und weiterwirkt?)"]. Andererseits aber: "der das Dritte(l) / den dritten (Tag) (bzw.: die Dreiheit, s.o.) *auseinander-/entzwei* macht", also "ein Drittel (aus einer bestehenden Dreiheit) wegspaltend", in einem im KŚS tatsächlich belegten Sinne – Bedeutungsansatz bei SURYAKANTA 594 'one-third of the vedi in measure'. Letzterem würde das Kompositum *vímadhya-* 'Mittelpunkt' entsprechen, eig. "das die Mitte auseinandermacht" bzw. "das die Mitte durchdringt", > "*κέντρον*, genaues Zentrum" (SADOVSKI 2000: 469, Begleitdokumentation, § 1.3.1.2.2.). Das substantivierte *tŕ̥tīyam* wird sehr wohl in der Bedeutung 'Drittel' gebraucht, u.a. wohlgemerkt gemeinsam mit *ví*-präverbierten Verbalkomposita *ví+ní+dhā* 'in verschiedene Richtungen deponieren, verteilen', etwa + *tredhā́* 'an drei Orten, dreiorts, dreifach', vgl. z.B. TS 6,4,9,2: táyos *tredhā́* bháiṣajyaḥ *ví nyàdadhus*: agnáu *tŕ̥tīyam,* apsú *tŕ̥tīyam* brāhmaṇé *tŕ̥tīyam* – KEITH 2,535: 'Their skill as physicians they deposited in three places, in Agni a third, in the waters a third, in the Brahman a third'. SURYAKANTA (a.a.O.) entscheidet sich zu AV 5,22,13 zugunsten von "a fever afflicting two days out of three". Dazu und zu waigali *átəŕ* 'übermorgen' SADOVSKI [Salzburg]. Das Hinterglied aller dieser exozentrischen Formationen (*-madhya-*, *-tr̥tīya-* etc.) ist substantiviert – "dessen Mittleres (Mitte), Drittes (dritter Tag, etc.) X ist" – aufzufassen! Cf. AiGr 3,413-417, § 209-210; typologisch vgl. auch gr. *ἐρίτριτος*, *ἐπίπεμπτος*.

[45] SURYAKANTA 671: "sadaṃ-d-i- [√*dā* 'bind'] [...] ever-binding". Über *sadaṃdi-* s. vielmehr AiGr 2/1,67, § 27 "Nominalstamm für Adverb als Vorderglied"; evtl. zum Stamm *di-* erweitert in madhyaṃ-*dina-*, slav. *dĭnĭ* 'Tag'; also als "dessen Tage ewig/immer/stets sind"? Cf. besonders ved. *sadyás* neben *sadívas* 'a(n ein und de)m selben Tag', wozu mit Lit. EWAia. 2,694: "Aus *sa°* [...] und unerweitertem **dei̯-* 'Tag' [...], wie in *adyá*". Dies ist die Attribution SCHULZES (1964: 843, cf. auch S. 844).

AVŚ 5,22,13:
tṛ́tīyakaṃ vitṛtīyáṃ
sadandím utá śāradám /
takmā́naṃ śītáṃ rūráṃ [ca]
gráiṣmaṃ nāśaya vā́rṣikam //13//

WHITNEY - LANMAN 1905: 1,261: The fever of the third day, of the two days out of three, the constant, and the autumnal, the cold, the hot, that of the hot season, that of the rainy season, do thou cause to disappear.

Symptomatischerweise kommt die AVP-Strophe nach der Stelle, in der das Fieber als eines bezeichnet wird, das *anyedyur ubhayedyus* wiederkehrt:

AVP. 1,32,4, cf. ed. ZEHNDER 1993, ad loc.
namaḥ śītāya takmane
namo rūrāya kṛṇmas vayaṃ te /
yo *anyedyur ubhayedyuś*[46] +carati (Ms. *caranti*)
tṛtīyakāya namo astu takmane //

Verehrung machen/erweisen wir dem kalten Fieber, Verehrung dir, dem brennenden; welches (Fieber) wandelt (rekurriert) als eines, das am nächsten Tag ist/vorkommt, als eines, das an beiden Tagen ist/vorkommt, dem Fieber, das "zu dem dritten Tag zu gehört" (nach drei Tagen wieder eintritt), sei Verehrung.

Die Rekurrenzen des Fiebers[47] in Saison- bzw. Tageszyklen sind ein wichtiger Topos der Beschwörungsgebete in der Indogermania. Man vgl. Bezeichnungen wie *tṛ́tīyaka-* 'dreitägig rekurrierendes Fieber', AVP 1,45,01c, einerseits, und das Lat. *quartānus* 'jeden vierten Tag vorkommend'; letzteres bezieht sich bei Plinius, *Nat. hist.* 7, 166, gerade auf das Fieber *(febris)*, wird als dessen stehendes Epitheton auch (zu einer Art Kenning) substantiviert zu *quartāna*. Lehrreich ist auch der Vergleich mit den Beschwörungsgebeten gegen chronisch zuschlagende Fieberarten im Euchologium Sinaiticum.

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[46] Kaśm. AVP (Abschrift T): ubhayebhyas. Cf. Ausg. von ZEHNDER 1993 ad locum.

[47] Zur Bestimmung der Krankheit takmán- als 'Fieber' s. Karl HOFFMANN, KZ 78, 1963, 89f. = HOFFMANN 1975/76: 1,153; weitere Lit. in EWAia. 1,611. Zu den Epitheta in AV. 5,22,3 in Vergleich zu 6,20,3 HOFFMANN 1975/76: 1,334: "das Fieber, das graubraun, Sohn eines Graubraunen, wie eine Bestäubung rötlich".

ganzen Leibes, Ausdauer[48] des ganzen Leibes". Außerkompositionelle syntagmatische Entsprechungen liefern Stellen wie Yt. 16,7:

yaṯ. hē. daϑaṯ.
razišta. cista. mazdaδāta. aṣ̌aoni.
pādauue. zāuuarə.
⁺gaošaēβe. sraoma.
bāzuβe. aojō.
tanuuō. vīspaiiå. druuatātəm.
tanuuō. vīspaiiå. vazduuarə.[...]

(BARTHOLOMAE-WOLFF, 275): [...] daß ihm die m a z d ā h geschaffene a š a heilige richtigste Č i s t ā schenke: Kraft für (seine) Füße, Gehör für die Ohren, Stärke für die Arme, Gesundheit *des ganzen Leibes*, Ausdauer *des ganzen Leibes.*

Vgl. auch die freie Phrase aus dem Yt. 14,29:

ahmāi. daϑaṯ. vərəϑraγnō. ahuraδātō.
ərəzōiš. xå. bāzuuå. aojō.
tanuuō. vīspaiiå. druuatātəm.
tanuuō. vīspaiiå. vazduuarə. [...]

LOMMEL: Ihm gab der gottgeschaffene Sieg des Hodens Quelle, der Arme Kraft, des ganzen Leibes Gesundheit, des ganzen Leibes Ausdauer (?) [...]

(BARTHOLOMAE –) WOLFF, 262: Ihm schenkte der a h u r a geschaffene V ə r ə θ r a -γ n a die Quellen des Hodensacks, die Stärke der Arme, Gesundheit des ganzen Leibes, Ausdauer des ganzen Leibes [...].

Signifikanterweise kommt 2 Verse früher (Yt.14,27) wieder das Epitheton *vīspō.paēsah-* (§ 2.2) vor.

Die Elemente des oben zitierten jav. Beispiels Y. 9,17 finden sich anders gruppiert im Familienbuch der Ātreya-s (in einem Lied, 5,57, des Śyāvāśva-Zyklus an die Maruts), in identischem Wortlaut: eine abstrakte Eigenschaft – *Kraft* (urar. **[H]auǰas-*) oder aber *Vorzüglichkeit* (urar. **ćrī-*) –, die sich am ganzen Leib zeigt und ihn *total* (urar. **u̯iću̯a-*) ausschmückt, der *Leib* selber bzw. das Ausschmücken im breitesten Sinne (Wzl. urar. **paiḱ*). Beide Texte enthalten also altes dichtersprachliches Erbe. Dies zeigt sich auch im gesamtindogerma-

[48] vazduuarə (dazu EWAia. 2,582) bezieht sich auf den Leib in Yt. 14,29 *tanuuō vīspaiiå* vazduuarə als "good state of the whole body" (cf. H.W. BAILEY, *Indagatio Indo-Iranica*, TPhS 1960, 66) und Y. 68,11 (*tanuuō* vazduuarə), hingegen Y. 31,21 auf Vohu Manah.

nisch verbreiteten Ausdruck 'die Feindschaften überwindend' mit der Beteiligung der Elemente uriir. **duaišas-* und **terH-*[49], die in einer Reihe von Idiomen im RV. und Avesta, u.a. über die indoiranischen Gottheit **sauma-*, begegnen.

Über die 'Kraft, die an den Leibern haftet', bzw. die den leiblichen Fortsetzern, der Nachkommenschaft, weitergegeben wird, äußert sich folgende Strophe (obwohl mit einem anderen Kraft-Wort, *bála-*):

> RV. 3,53,18:
> *bálam̥* dhehi *tanū́ṣu* no
> bálam indrānaḷútsu naḥ /
> bálam̥ tokā́ya tánayāya jīváse
> t$_u$vám̥ hí baladā́ ási //
>
> GELDNER 1,395: Stärke verleih unseren Leibern, Stärke unseren Zugstieren, Indra, Stärke dem leiblichen Samen zum Leben, denn du bist der Stärkeverleiher!

2.2. Aber auch das Kompositum avestisch *vīspō.paēsah-* = ved. *viśvá-peśas-* "der eine totale (overall) Ausschmückung hat" gehört in das Stratum zumindest des urindoiranschen poetischen Wortschatzes, ist rekonstruierbar als **uićua-paićas-*. Vgl. den Phraseologismus RV. 5,57: "[...] Auf euren Schultern sind die Speere, ihr Marut, Macht, Stärke, Kraft ist in eure Arme gelegt, [...] Mut in eure Häupter, Waffen auf eure Wagen, die ganze Schönheit ist auf eure Leiber aufgetragen – *víśvā* vaḥ śrī́r ádhi *tanū́ṣu pipiśe* //

> RV. 5,57,6a-d
> r̥ṣṭáyo vo maruto ám̥sayor ádhi
> sáha *ójo bāh$_u$vór* vo bálam̥ hitám /
> nr̥mṇā́ śīrṣás$_u$v ā́yudhā ráthesu vo
> *víśvā* vaḥ śrī́r ádhi *tanū́ṣu pipiśe* //
>
> GELDNER 2,65: Auf euren Schultern sind die Speere, ihr Marut, *Macht, Stärke, Kraft ist in eure Arme gelegt*, Mut in eure Häupter, Waffen auf eure Wagen, die ganze Schönheit ist auf eure Leiber aufgetragen.

Ved. *viśvápeśas-* entspricht dem avestischen *vīspō.paēsah-* praktisch Laut für Laut (bezeugt ist daneben ein Hg °*paēsa-*); zum Aus-

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[49] Cf. zu víśvā *dvéṣām̐si* tarati SCHMITT 1967: 189, Fn. 1118, OBERLIES 1999: 121. Andererseits cf. das Entheos-Kompositum *vídveṣas-* 'Haß, Feindschaft entfernend' (faktitiv) bzw. 'fern von F.' in der Begleitdokumentation § 1.1.2.1., zu SADOVSKI 2000: 465).

lautsvokal des Vorderglieds s. zuletzt HOFFMANN - FORSMANN 1996: 64, § 33fb.

Yt. 14,27:
[...] ahmāi. dasəmō. ājasaṯ. vazəmnō.
vərəϑraγnō. ahuraδātō.
vīrahe. kəhrpa. raēuuatō.
srīrahe. mazdaδātahe:
baraṯ. karətəm. zaraniiō.saorəm.
frapixštəm. *vīspō.paēsaŋhəm:*
auuaϑa. ājasaṯ.: [...]

(BARTHOLOMAE –) WOLFF, 261: [...] Zu ihm kam fahrend her der ahura-geschaffene Vərəθraγna zu zehnt in der Gestalt eines prächtigen schönen mazdahgeschaffenen Kriegsmanns; er führt ein mit Gold eingelegtes Messer [...], ein verziertes, mit allerlei Zierat versehenes. So kam [Vərəθraγna] her. [...]

LOMMEL, 138: [...] er trug ein golden (eingelegtes?), geschmücktes, reich verziertes Schwert; – so kam er daher.

Die buchstäbliche Übersetzung in Y. 9,17 (o., 2.1.) wäre "der eine totale (***overall***) Verzierung hat"; INSLER, IF. 67, 1962, 54: "completely ornamented". (Die Wiedergabe durch BARTHOLOMAE mit 'allseitig' impliziert die Annahme einer Bedeutungsabschwächung, etwa "das Wissen, das alles Drum und Dran hat"). Semantisches zur Wzl.[50] bei RENOU 1958: 25 in der kleinen Untersuchung *piś-* et *péśas-*: "*Piś-* signifie en gros "orner, décorer», plus précisément «orner de couleurs vives ou de lumières»."[51]; WERBA 1997: 357, Nr. 425 s.v.

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[50] Weitere Komposita mit diesem Hg im RV.: *purupéśas-* (dazu INSLER a.a.O., 53-54 et pass. mit weiteren iir. Parallelen zum Stilistischen und Lexikalischen) 'dessen Verzierung reichlich ist' usw. (*áśvapeśas-*, *ṛtápeṣas-*, *vā́japeśas-*, *vīrápeśas-*, *śúcipeśas-* [falscher Akz. GRASSMANN 1735c; richtig 1403], *híraṇyapeśas-* ≈ jav. *zaraniiō.paēsī-*, f. 'goldgeschmückte', *zaraniiō.pis-* 'ds.', *apeśás-*, *supéśas-*, *nṛpéśas-*). Mit demselben Vg und Wurzelnomen im Hg: Yt. 5,78, Y. 57,20 *vīspō.pis-*, cf. z.B. DUCHESNE-GUILLEMIN 1936: 164, § 201.

[51] Etwas anders ist die Beurteilung des Kompositums ibid.: "Les grenouilles-brâhmanes de VII.103,6 sont représentées «moduler en parlant leurs voix de diverses manières», *purutrā́ vā́cam pipiśur vádantaḥ*. C'est la pensée poétique qui est qualifiée de *viśvápeśas-* «douées de tous ornements» I,61,16, et dans laquelle le poète est invité à deposer les *bráhman*, les «formulations» énergétiques : donc, d'un côté l'influx spirituel, de l'autre le *peśas*, l'art poétique".

2.3. *viśváujas-* wird RV. 10,55,8 von Indra in einer Halbstrophe mit gleichgestaltetem *viśvámanās* verwendet:

yujā́ kármāṇi janáyan viśváujā
aśastihā́ *viśvámanās* turāṣā́ṭ /
pītvī́ sómasya divá ā́ vr̥dhānáḥ
śū́ro nír yudhā́dhamad dásyūn //

GELDNER 3,219 übersetzt: Mit der verbündeten (Marutschar) Taten zuwege bringend, der Allkräftige, der die Unehre tilgt, der allen Verstand besitzt [...]

Die Bahuvrīhi-Auflösung wäre a priori "die ganze Kraft habend". Das gesamte Kompositum wird aber in der *externen* Satzsyntax verwendet im Sinne "die ganze Kraft *ausübend*" (faktitivisch) hat einen prädikativischen Wert 'mit ganzer/all seiner Kraft' und ist quasi einem Adverbiale gleichwertig. Ähnliches gilt für das im selben Vers verwendete *viśvámanas-* 'mit all dem Verstand'.

Die Alternative zu GELDNERs Übersetzung ist also: "Der mit dem (Marut)-Verbund Taten voll bringt ***mit all seiner Kraft***, der den Nichtverehrenden Tötende, ***mit all seinem Verstand***, der die Vordrängenden Überwältigende [...] hat Soma getrunken".

Die internsyntaktische Beziehung Vorderglied : Hinterglied ist eine prädikativische Attribution, auch das Gesamtkompositum tritt in seinen externsyntaktischen Verhältnissen *prädikativisch*, d.h. als Adverbiale auf. Zum Verständnis der externen Syntax dieser Bildung tragen eine Reihe von prädikativischen freien Phrasen mit *ójas-* und *víśva-* wie in RV. 5,32,10cd bei:

sáṃ yád *ójo* yuváte *víśvam* ābhir
ánu svadhā́vne kṣitáyo namanta //

GELDNER 2,31: Wenn er sie seine ganze Stärke fühlen läßt, so unterwerfen sich die Völker dem Selbstherrlichen [...][52]

[52] víśvam und *ójas* kommen gemeinsam in einer Phrase vor, ebenfalls von Indra, im Vers *b* von RV. 8,17,9 (die eher als Auflösung des nachr̥gv. *viśvéśva(ra)-* "Herr über alles" dienen kann).

índra préhi purás tuváṃ
víśvasyéśāna ójasā / = 9,101,5d
vr̥trā́ṇi vr̥trahañ jahi //

GELDNER 2,317: Indra, geh du voran, der du mit Kraft alles beherrschest, erschlage die Feinde, du Feindetöter!

2.4. *viśváśardhas-* ist belegt RV. 5,34,8 als Prädikatsergänzung, abhängig von einem Verbum sentiendi. Die Gruppe von direktem Objekt plus Präikativa *jánau sudhánau viśváśardhasāu* läßt sich im Beleg mit "(als solche,) die (ihre) Streitmächte ***komplett*** (vollständig) haben [...]" wiedergeben, mit dem kollektivischen Begriff *śárdhas* im Hinterglied als Definiendum:

RV. 5,34,8:
sáṃ yáj jánau sudhánau *viśváśardhasāv*
áved índro maghávā góṣu śubhríṣu /
yújaṃ hi̯y ànyám ákr̥ta pravepani̯y
úd īṃ gávyaṃ sr̥jate sátvabhir dhúniḥ //

GELDNER 2,34: Wenn der freigebige Indra erfahren hat, daß zwei reiche Volksstämme vollständig gerüstet sind (zum Kampf) um schmucke Kühe, da verbündet sich nämlich der Schreckensverbreiter mit dem einen und er treibt die Rinderherde (des anderen) mit den Kriegern lärmend (aus der Herde) heraus.

Die dazu parallele freie Phrase liefert RV. 7,59,7c (von der Marutschar):

RV. 7,59,7cd
sasváś cid dhí tanu̯vàḥ śúmbhamānā
ā́ haṃsā́so nī́lapr̥ṣṭhā apaptan /
víśvaṃ śárdho abhíto mā ní ṣeda
náro ná raṇvā́ḥ sávane mádantaḥ //

GELDNER 2,235: Denn gar heimlich machten sie ihre Leiber schön und sind (wie) Schwäne mit schwarzblauen Rücken hergeflogen. Ihr habt euch, die ganze Schar, rings um mich niedergesetzt wie fröhliche Männer am Trankopfer euch berauschend.

2.5. Weiterhin kann *viśvá-* in einer Art besonderer Art prädikativisch-attributiver Verbindung zu einem Nomen, speziell Adjektiv, vorkommen: Bei dieser bezieht sich das Totalitätspronominale auf ein Adj. *X-ig* fast wie ein Adverb im superlativischen bzw. elativischen Sinne: '***ganz*** X-ig', ohne daß es in einer bestimmten Kasusform erstarrt, sondern vielmehr kongruierend. Man vergleiche typologisch auch das russ. (Identifikations-)Pronominale *samyj* 'der gleiche; selbst; allein', das in genau gleichen syntaktischen Kontexten superlativisch fungiert und sogar mit dem Status einer voll berechtigten, periphrastisch-analytischen Superlativform grammatikalisiert ist *samyj sil'nyj* 'der stärkste, (the) *most* powerful'.

víśva- steht in der freien Syntax nicht selten als *Adverb* neben einem Adjektiv: cf. RV. 4,1,1(ef) '<u>ganz</u> *ā́deva-*'[53]:

t$_u$vā́ṃ h$_i$y àgne sádam ít samanyávo
devā́so devám aratíṃ n$_i$yerirá
íti krátvā n$_i$yeriré /
ámart$_i$yaṃ yajata márt$_i$yeṣ$_u$v ā́
devám ā́devaṃ janata prácetasaṃ
víśvam ā́devaṃ janata prácetasam //

Dich, Agni, den Gott, haben ja die Götter jederzeit einmütig zu ihrem Wagenlenker bestellt, in diesem Sinne bestellt: Verehret den Unsterblichen unter den Sterblichen, erzeuget den götterfreundlichen Gott, den Verständigen, den ganz Götterfreundlichen erzeuget, den Verständigen! (GELDNER, 1,412, cf. SADOVSKI 2001a: § 4).

J. ZUBATÝ hat IF 25 (= Fs Brugmann), 1909, p. 200ff., einen Kompositionstypus beschrieben, der diesem außerkompositionell-syntagmatischen Sachverhalt vollkommen entspricht. Das Vorderglied besteht aus Totalitätspronominale mit prädikativischer/adverbieller Bedeutung, dem Hg entsprechen als Simplicia (Qualitäts-)Adjektiva bzw. *-*to*-Verbaladjektiva. Die Bedeutung des Gesamtgebildes ist bei einem Hg *X* 'ganz *X-ig*'. Auch wenn nicht alle Beispiele ZUBATÝs[54] unumstritten geblieben sind, kann man den beschriebenen Bildungen den Status eines Sondertypus anerkennen. Diesen bespreche ich unter der Benennung "ZUBATÝ-Typus" in einer Spezialarbeit, insbesondere angesichts der Möglichkeit, unter Erklärung des Hg.s als *substantiviertes* (Verbal-)Adj. diesen Typus (mit Auflösung "dessen *X*-heit total ist", also *viśváśveta-* "dessen Weißheit/Hellsein total ist") zusammen mit weiteren Sondertypen wie *amṛ́ta-* und *ápūrva-* und ferner mit den *παμποίκιλος-* "DK" als urpsr. Untergruppe der *Bahuvrīhi*-Komposita (und nicht der DK) zu erklären.

2.6. Nun wird das universellere *viśva-* in einigen Komposita doch als zu breit empfunden (zu seinem Bedeutungsfeld s. BRUGMANN 1894 [mit

[53] Zu dieser Strophe und dem Kompositum vgl. SADOVSKI 2001: 111, § 4.

[54] S. Yt. 5,13 *yeŋ́he. caϑβārō. vaštāra. / spaēta. vīspa. hama.gaonā̊nhō* 'der vier Zugtiere hat, ganz weiß, gleichfarbig'. – Aber vgl. OETTINGER, unpubl. *Habilarbeit*, ad 5,13: Welche (!) vier Zugtiere besitzt, weiß (und) alle gleichfarbig, aus gleichem Gestüt, erhaben, überwindend alle Anfeindungen [...]', cf. auch Komm. ad 13a: "*vispa* und *vastara* nur als Dual. möglich".

versalen (Über-)Blick habend" einerseits und dem zusätzlich charakterisierten *viśvátaścakṣuṣ-* "dessen Auge(n) überall / in allen Richtungen (gerichtet) ist/sind" andererseits.

B. Ordinalausdrücke im Vorderglied:[57] Bahuvrīhis mit dem Vg *mádhya-* im Veda.

1. Bei einem *Vorderglied in der Stammform* sind Possessivkomposita mit *mádhya-* (zu dessen Syntagmatik s.o., § 1.3. a) der Abt. 1) selten. Reichlich vertreten hingegen sind die *desyntagmatischen Ableitungskomposita*: die bekannten Risch-Hypostasen. Bei diesen Ableitungskomposita werden Konstruktionen wie *Locatiuus absolutus* oder *Acc. temporis* etc nominalisiert: *μέσαι νύκτες* / (*περὶ*) *μέσας νύκτας* 'um Mitternacht' wird zu *μεσονύκτιος* 'mitternächtlich'.

Die altindische Entsprechung von *μεσονύκτιος* (angesichts der Attributionsart) ist *madhyarātra-*, gebildet mit Ersatz des *-ī*-Suffixes des Hg-Grundwortes (RV.+ *rā́trī-*, f., 'Nacht', AV+ auch *rā́tri-*, f.). *madhyarā́tra-* ist in der Brā́hmaṇa-Prosa bezeugt (JB. 1, 231; AB. 4,5; GB. 2,5,1; JB. 1,208 (bis)). Es tritt an einigen der Stellen (JB 1,231, 2x JB. 1,208) in einer Triade mit *prathamarātra-* und *apararātra-* auf. Das Verhältnis der Glieder ist prädikativische Attribution: die Rede ist nicht von drei Nächten, sondern, genauso wie im Fall von *μεσονύκτιος*, von dem ersten, mittleren und letzten Teil einundderselben Nacht; der Attributionstypus ist also *partitiv*.

> JB 1,231 n-p
> yathā vā ahas tathā rātrir yathā rātris tathāhaḥ.
> *pūrvāhṇo madhyaṃdino 'parāhṇaḥ pūrvarātro*
> *madhyarātro 'parātraḥ.*
>
> Wie fürwahr der Tag (ist), so (ist) die Nacht, wie die Nacht, so der Tag: erster Teil des Tages, Mittag, letzter Teil des Tages; erster Teil der Nacht, Mitternacht, letzter Teil der Nacht (cf. BODEWITZ 1990: 129).[58]

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[57] Detailierter zu dieser gesamten Kompositaklasse SADOVSKI 2004.

[58] Cf. aber KauśB. 17,6 (trad. aufgefaßt als DK mit restriktiv-kontrastivem Gliederbezug, von [den drei Nächten des?] Atirātra[-Festes]):
[...] *prathamarātrād* eva tad asurān nirghnanti [...]
madhyarātrād eva tad asurān nirghnanti [...]
uttamarātrād eva tad asurān nirghnanti [...]
evam eva etat stotriya anurūpair ahorātrābhyām
asurān nirghnanti [...] //6//
KEITH 443 [unter "xvii. 8."]: [...] verily thus from the first night – they smite away the Asuras; [...] verily thus from the first night – they smite away the

Weiteres liefert etwa KauśB. 1,3: *madhyāvarṣa-* 'in der Mitte der Regensaison geschehend". *madhyāhna-* KāGā p. 118, 6; Sā 2,5,3.

'Mittag' bezeichnen die Griechen genauso mit prädikativischer Attribution als *μέσον ἦμαρ* wie als *μεσημβρία*, das nach SCHULZE 1966: 835-836 nicht etwa als ein Komplexivausdruck mit Kollektivsuffigierung zu bestimmen ist, sondern als im Fem. substantiviertes Adj.: "es gehört in einer Reihe mit *ἠοίη* [...] *δείλη ἑσπέρα* oder den jüngeren *πρωΐα ὀψία*" (*ibid.*). Die Passage aus dem Hymnus an Apollo, in der *μέσῳ* [...] *ἤματι* 'zu Mittag' bedeutet, ist Beispiel für ein Mesonyktios-Komposita zugrundeliegendes Syntagma mit prädikativischer Attribution. Wesentlich hier ist die Korrespondenz mit den indischen Begriffen *pūrvā́hna-*, m. 'Beginn des Tages', *madhyā́hna-*, m. 'Mitte des Tages', *aparā́hna-*, m. 'späterer Teil des Tages' (kurz kommentiert von SCHULZE 1966: 833).

2. Das *Vorderglied in (adverbialer) Kasusform* (Lok. Sing.) kommt sowohl bei den Possessivkomposita als auch bei den desyntagmatischen Ableitungskomposita vor.

2.1. Neben der Klasse mit prädikativischem Attribuitionsverhältnis existiert bei den *μεσονύκτιος*-Komposita ein entsprechender Subtyp mit kasuellem Vorderglied, den der klassische Aufsatz von RISCH nicht behandelt hat. Sein Musterbeispiel ist das avestische *maidiiōi(.)- šəm-a-* 'mitten im Sommer befindlich'. Diese Hypostasen nominalisieren Syntagmata der Art "in der Mitte von X", im Avestischen gehören dazu auch gav. *maidiiōi.mā̊nha-*, jav. *maiδiiōi.mā̊nha-*, EN. "mitten im Monat geboren", *maiδiiōi. zarəmaiia-* usw. Zum jav. freien Syntagma *maiδiiōi paitištāne* (Vd. 8,8)[59] gehört weiters das Kompositum *mai-*

Asuras; [...] verily thus from the first night – they smite away the Asuras; [...] so with these strophes from day and night they smite away the Asuras.

[59] Vd. 8,8:
aētaδa. hē. aēte. mazdaiiasna.
aiŋhā̊. zəmō. auua.kanəm. auua.kanaiiən.
maiδiiōi. paitištāne. xrūždisme.
maiδiiōi. narš. varədusme. [...]
(BARTHOLOMAE –) WOLFF 366: Dort nun sollen die M a z d ā h anbeter in der Erde eine Grube ausgraben: bis zur Mitte (der) Bein(höhe) in

Weisen [...] herum glänzend als solche, die die Metren in ihrer Mitte / mitten in ihrem Kreis habend":

> TS 4,3,11,2(f)-3(g)
> triṁśát svásāra úpa yanti niṣkr̥táṁ
> samānáṃ ketúṃ práti muñcámānāḥ //
> r̥tūṁs tanvate kaváyaḥ prajānatī́r
> *mádhyechandasaḥ* pári yanti bhā́s$_u$vatīḥ //
>
> KEITH 2,334: Thirty sisters go to the appointed place, / Putting on the same badge [2],
> The sages spread out the seasons, the knowing ones, / With the metres in their midst, go about in brilliance.

Diese Gruppe besteht aus einer Reihe nachr̥gvedischer Komposita (wie Br. + *madhyenidhana-* JB., PB+; cf. VWC s.vv. und SADOVSKI 2004): Relevant sind darunter diejenigen, deren Hg kein Wurzel*nomen actionis* ist: also die Nicht-Verbalrektionskomposita. In der YV.-Prosa gibt es allerdings Komposita mit lokativischem Vorderglied, deren Hinterglieder zwar mit einem Verbalbegriff verbunden sein können, von der usuellen Semantik her aber weitgehend als Konkreta empfunden werden: So ist in unserem Musterwort aus der TS. *mádhyechandas-*, dessen Hg das Konkretum 'Vers' ist. Weiterhin gehört hierher ch das im schwarzen YV. bezeugte *madhyejyotiṣ-* "Licht in der Mitte habend", 'eine Versart' (*pw* 20a).[62]

In diesen Kontext möchte ich auch die seit dem AV. und den YVS. belegten Komposita des Typus *pūrvédyuṣ*, *ubhayédyuṣ/ubhayádyuṣ* mit dem

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[62] Akk. Sing. *madhyejyotiṣam*: KS 20,5.7, cf. KpKS 31,7. Das Hg *jyótiṣ-*, n. (RV.+) steht zwar offenbar mit der Verbalwurzel *DYOT/dyut* 'blitzen, leuchten' in Verbindung, zu der jedoch ein Verbalstamm mit der im Substantiv vorliegenden "lautlichen Variante" *jyóta-* außer im Kausativ (AV.+) nur ein einziges Mal (MS 12,4[m] : 147,3) in Bezug auf Agni (*jyotatām* 'soll blitzen', MS-Pp. aber *dyotatām*: GOTŌ, *Die "I. Präsensklasse" im Vedischen"*, Wien 1987: 176-177 mit Fußn. 298 und Lit.) belegt ist. Außerdem hat die Wurzel nach HOFFMANN 1975/76: 1,254, Fn. 15 primär punktuelle Aktionsart, also nicht '(durativ) leuchten', sondern momentan 'blitzen'. Der Bedeutungsbereich von *jyótiṣ-* 'Licht' sowohl in abstraktem Sinne -v.a. durativ 'Leuchten'; daneben auch momentan 'Aufleuchten' – als auch "konkret", 'Licht(strahlen)', ist jedoch nicht auf die Punktualität der Wurzel einzuschränken. Cf. neuerdings den monographischen Teil und das Schlußkapitel der Studie von Ulrike ROESSLER *Licht und Leuchten im Rgveda*; 1998; zur Wurzel mit Lit. WERBA 1997: 198f, Nr. 99. – Mit Adv. im Vg ist das Possessivkompositum ŚB. 14,7,1,7 *antárjyotiṣ-* 'qui a lumière intérieure', das als eine Art typologische Parallele zu *madhyejyotiṣ-* ist und zugleich des letzteren Deutung als Bahuvrīhi bekräftigt.

Zeitbegriff 'Tag' im Hinterglied und jeweils einem Pronominale bzw. Ordinale in Lokativ- oder Stammform im Vg situieren.[63] Entgegen den Hypothesen einer Reihe von Gelehrten über Univerbierungen unter der Beteiligung erstarrter alter Genetive (oder Lokative) des Tageswortes wird a.a.O. versucht, in diesen Bildungen Exozentrika (wsch. Bahuvrīhis) der Formel "Vorderglied im Lok. plus Hinterglied aus Raum-/Zeitbegriff ohne Kompositionssuffix" zu sehen.

Auch in dieser Klasse tritt, zum Unterschied von den Stammkomposita, eine *Beeinflussung der Gestalt des Vordergliedes durch die nichtkompositionelle Syntax* auf, welche dem Kompositum zugrundeliegt. Hypostasiert werden Prädikationen mit Komplement insbesondere aus einem Lok. Sg., etwa mit in-/adessivischem Sinn "dessen X in/auf/an/ bei Y ist". Dabei lassen sich Lokative vielfach adverbialisiert interpretieren: so außer *madhye-X-* "bei dem das X in-der-Mitte / dazwischen (darunter) ist" der im Ved. und Av. verbreitete iir. Typ **(H)agrai̯*-X- "dessen X an der Spitze ist".

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[63] Wie zunächst beim Vortrag auf der Österreichischen Linguistiktagung 1998 hervorgehoben; s. Verv. [Salzburg].

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Zu der futurischen Grundlage der sog. Optativformen des Altpreußischen

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1. In der apr. Grammatik wird der Terminus "Optativ" für diejenigen auf *-si*, *-se*, *-sei*, *-sai* ausgehenden Verbalformen gebraucht, die auf die 3.P.Sg. beschränkt sind und eine Aufforderung bzw. einen Wunsch ausdrücken. In funktioneller Hinsicht sind sie mit den litauischen Permissiven vergleichbar, vgl. z.B. apr. *boūsei* "sei", das z.T. mit lit. *teesiẽ* und z.T. mit lit. *testo* korrespondiert. Zur Frage der Herkunft dieser Optativbildung und zu den Ursachen der Vokalvariation in ihrer Endung wurde seinerzeit heftig diskutiert, wozu ich auf die Aufsätze von F. SPECHT 1928 und N. VAN WIJK 1929 sowie das kritische Referat bei J. ENDZELIN 1944, § 246 verweise. Die heutige communis opinio geht auf die von STANG 1942, 266ff. und 1966, 442ff. erzielten Ergebnisse zurück und besagt, daß es sich dabei um eine erst auf preußischem Boden erfolgte Optativbildung zum Futurstamm handelt, die «unter dem Einfluß des Opt. der athem. Präsentia (zu denen das Fut. wahrscheinlich selbst gehörte) entstanden ist.» (STANG 1942, 268). Der Autor stellt den früher erwogenen Zusammenhang des *s*-Elements der Endung mit dem alten *s*-Aorist in Frage, indem er argumentiert, daß die Verbalwurzeln, von denen die Optative *boūsei*, °*dasei*, °*eysey* deriviert sind, gerade zu denjenigen gehören, die im Indogermanischen keinen *s*-Aorist bilden, vgl. ai. *ábhūt*, *ádāt*, lett. Prät. *gāja* zum Aor. **gā-* (STANG 1942, 266f.[1] und 1966, 442). Er analysiert *boūsei* "sei" als **bū-s-ei-*, mit *-s-* als Futurmarker und *-ei* als Optativsuffix (a.a.O.). Es fällt aber auf, daß das letztere nach STANG auf eine «athematische Suffixform **-ēi*», deren weitere Herkunft nicht näher präzisiert wird, zurückgehen soll. Dieses Diktum mutet um so seltsamer an, als ein Kommentar zur Beziehung von **-ēi* und einem im athematischen Optativ zu erwartenden Suffix **-i̯ē-*/**-ī-* (uridg. **-i̯eh*$_1$*-*/**-ih*$_1$*-*) zueinander fehlt. Die Annahme eines Optativmarkers **-ēi* hängt somit in der Luft und vermag nichts zur Klärung der Endung von *boūsei* beizutragen. STANG 1966, 442 glaubte, in der Koexistenz des lettischen ma. Imperativ *iêsiẽm* "eamus" mit dem Futurum *iêsim* "ibimus" eine Paral-

[1] Diese Stellungsnahme wurde von ENDZELIN 1944, § 246 unterstützt.

lele für die Optativform des Futurums gefunden zu haben. Dagegen läßt sich einwenden, daß es nicht ausgeschlossen werden kann, daß die Ipv.-Form *iêsiēm* doch auf der Umbildung des Futurum beruht, wobei das Segment *-sie-* an die Stelle von *-si-* in Analogie zum Permissivmerkmal *-ie-* (aus urbalt. **-ai-* < uridg. **-o-ih₁-C* des thematischen Opt.[2]) getreten ist.

Bei der Frage nach der Vielfältigkeit des Endungsvokalismus (*-sei* 14x, *-se* 9x, *-sai* 3x, *-si* 2x) geht STANG 1966, 442 davon aus, daß *-sei* als Hauptvariante angesehen werden soll[3] und setzt fort: «Die Endungen *-se* und *-si* sind gewiss nur Schreibweisen für *-sei*. Die Endung *-sai*, die nur dreimal vorkommt, ist wohl ein Fehler, der in Verbindung mit den früher besprochenen *ai*-Formen in der Präsensflexion der athem. Verba aufgekommen ist (vgl. 2.P.Sg. *-sai*, 2.P.Pl. *-tai*)». Unter dem Blickwinkel der apr. Graphik läßt sich m.M.n. keine von diesen Behauptungen aufrechterhalten. Darauf wird noch weiter unten näher eingegangen (§ 5ff.). Alles in allem lassen die angeschnittenen Schwachpunkte die Stangsche Hypothese über **-s-ēi* wenig plausibel erscheinen.

2. Im folgenden wird die Auffassung vertreten, daß die sog. Optativformen des Apr. in Wirklichkeit nichts Optativisches an sich haben, sondern daß sie von Hause aus rein futurische Formen der 3.P. auf **-si* sind. Der modale Gebrauch der letzteren, die ich hinfort lieber als "Permissiv" bezeichnen möchte, hängt mit der Herausbildung einer neuen, nämlich einer periphrastischen Futurform (Hilfsverb *wīrst* + Ptz. Präs. Akt. auf *-ns*[4]) zusammen. Er läßt sich damit plausibel begründen, daß infolge der genannten Innovation die alte Futurbildung auf **-si* in die Rolle einer sekundären, u.zw. nicht-indikativischen Funktion verdrängt wurde. Schließlich wird in bezug auf die unterschiedliche Behandlung der Endung **-si* im Textbefund behauptet, daß es sich dabei z.T. um die Bewahrung einer solchen Endung (*-si*) und z.T. um ihre lautliche Umwandlung in Zuge zweier fakultativer Lautentwicklungen handelt. Die erste von ihnen ist die Senkung *i* > *e* (daher **-si* > *-se*), die zweite ist die Diphthongierung *i* > *ei*/*ai* (daher **-si* > *-sei* bzw.

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[2] Vgl. lit. *te-es-iẽ*, *te-dirb-iẽ* neben ai. *bhấret*, gr. φέροι (STANG 1966, 422).

[3] So bereits VAN WIJK 1918, 60

[4] Eingehender dazu Verf. 2000b.

-sai). Es sei hinzugefügt, daß sich die Auswirkungen der beiden Lauttendenzen keineswegs auf die in Frage kommenden Futur- bzw. Permissivformen beschränken, sondern sich auch in gewissen anderen Formkategorien geltend machen.

3. Mit dem Ziel, eine solche Annahme wahrscheinlich zu machen, werden zunächst zwei Beweisgruppen vorgeführt. Die erste besteht aus den wenigen Formen auf *-sV* (*V = i, e, ei, ai*), die im Enchiridion immer noch in ihrer Primärfunktion als Futura fungieren und hiermit eine plausible Stütze für die Bewertung derjenigen *sV*-Bildungen abgeben, die nicht indikativisch, sondern permissivisch gebraucht sind. Die zweite Gruppe bilden die Belege für die 2.P.Sg. des athematischen Präsens auf **-si*, die eine Endungenvariation *-se*, *-sei*, *-sai* aufweisen und dadurch einen willkommenen Bezugspunkt für die Erklärung der gesenkten bzw. diphthongierten Permissivendungen darstellen.

4. Nun findet man im apr. Enchiridiontext vier Belege, die sich zwanglos als spärliche Reste der Futurformen interpretieren lassen. Es sind dies einerseits *ēisei* und *postāsei*, deren Bildung primär ist (*ei-s-*, **stā-s-*), andererseits *giwassi* oder *gīwasi*, *etskīsai*, die auf einem sekundären *ā-* bzw. *ī*-Stamm aufbauen. Als Ableitungsbasis des Futurums dient wie im Lit.-Lett. der Infinitivstamm, vgl. 1. *[eit] "gehen" (lit. *eĩti*), belegt *perēit*, *pereit* "kommen", 2. *postāt* oder *postātwei* "werden" (lit. *pastóti*), 3. *[gi:va:t] "leben" (lit. *gývoti*, *gyvóti*), 4. *[atskí:t] "auferstehen".[5] Für die Bewertung der genannten Futurbelege ist einerseits ihr Satzgebrauch, andererseits die Lautung des entsprechenden Satzes in der altlitauischer Übersetzung zu berücksichtigen, insonderheit deshalb, weil im alit. Vergleichstext in Entsprechung zu den apr. *sV*-Formen jeweils die Futurformen auftauchen. Da im thematischen Verb die Form der dritten Person auf alle Personen des Singulars verallgemeinert wurde (ihre Unterscheidung voneinander versichert das obligatorisch angekoppelte Personalpronomen)[6], werden die ferner unten angeführten Futurformen der 2.P.Sg. ungeachtet ihres Personbezugs im Satz morphologisch als Bildungen der dritten Person interpretiert. Vgl.:

[5] Vermutlich ein Lehnverb aus mhd. *erstēn* "vom Tode auferstehen", s. Verf. 2000a, 146f.

[6] S. Verf. 1998, 164.

4.1. ēisei (1x) = [éisei] Fut. 2.P.Sg. "du wirst gehen". Eine Abweichung ggü. dem dt. Präs. (*wenn du*) *gehst*.

81 1 Bītai kaden tu prei laſtan **ēiſei** 2 turei toū tien Siggnat
[dt. Des Abends / wenn du zu Bette geheſt / ſoltu dich ſegnen]
[alit. Wakarą / kada tu **eiſi** gultu perſißegnok VE 36_{10}]

N.B. Aus *[eisi] 3.P. diphthongiert, urverwandt mit lit. *eĩs*, 1.Pl. *eĩsime*. In einem völlig parallelen Kontext erscheint die Futurform *etskīsai*, s. § 4.4. Vgl. noch das Kompositum *pareysey* in § 6.2. Zum Enddiphthong vgl. *audasei*, *boūsei* usw. (§ 6.2).

4.2. postāsei (2x) = [postá:sei] Fut. 2.Sg., hier i.S.v. dt. "wirst, werdest".

105 1 as quoi tebbe 2 toūlan Gulſennin teickut / kantou [!] ſen brendeker(3)mnen **poſtāſei**
[dt. Jch wil dir viel Schmertzen ſchaffen / wenn du Schwanger wirſt]
[alit. Padaukſinſiu ſkaudeghimus tawa / kuometu neſ(12)czia **buſi** VE 52_{11}f.]

105 15 ſtu ilgimi kai tu etkumps prei ſemman **po**(16)**ſtāſei** eſſe kawīdſmu tou animts aſſai
[dt. biß das du wider zur Erden werdeſt / dauon du genommen biſt]
[alit. iki ßeme atpencz **pawirſi** [53 1] iſch kurios eſſi imtas VE 52_{22}f.]

N.B. Mit Diphthongierung aus *[pastá:si] 3.P. entstanden. Entspricht dem lit. *pastõs* "er wird zu", 1.Pl. *pastósime*. Zum Enddiphthong vgl. *audasei*, *boūsei* (§ 6.2).

4.3. gīwasi (1x) = [gí:va:si], **giwassi** (2x) Fut. 2.P.Sg. "du wirst leben". Eine Abweichung ggü. dem dt. Präs. (*daß du*) *lebst*.

29 17 Tou turri twaian Tāwan bhe [—] Mūtien 18 ſmūnint / kai tebbe labban ēit bhe [—] ilgi **giwaſſi** 19 noſemien / [—] [—] [—] [—] [—] [—] [—] [—]
[dt. Du ſolt dein Vater / vnd dein Mutter 15 ehren / auff das [dirs wohlgehe vnd] du lange lebeſt imland / das dir der Herr dein Gott geben wird]
[alit. Garbink tiewa ir motina ta(13)wa / ieng [—] [—] [—] [—] ilgai **giweſi** ant ßemes / [—] [—] [—] [—] [—] [—] [—] [—] VE 12_{12}f.]

95 1 Smuninais Tawan bhe Mutien ... iſſpret(3)tīngi / kai tebbei [—] labban ēit / bhe ilga **gīwaſi** noſem(4)mien
[dt. Ehre Vater vnd Mutter ... Nemlich / Das dirs wol(3)gehe vnd lange lebeſt auff Erden / Ephe. 6.]

tūlninai "mehrst"; *skellāntei* neb. *skellāntai* "schuldig"; *kanxtei* neb. *kānxtai* Adv. "tüchtig" (hierzu mit einem inlautenden Diphthong: *angsteina* neb. *angstainai* Adv. "morgens"; *gerbeis* neb. *gerbais* "sprich"; *weddeis* neb. *wedais* "führe"; *mukineyti* neb. *mukinaiti* "lehret"; *teikūuns* neb. *taykowuns* "gemacht, geschaffen"; *einan* neb. *ainan* Akk.Sg. "einen"). Daraus folgt, daß die Graphien ⟨-sei⟩ und ⟨-sai⟩ eine schwankende Schreibung ein und derselben Endung, die am ehesten als [-sai] anzusetzen ist, vertreten. Zieht man nun das Faktum in Betracht, daß die Schreibungen ⟨-Cei⟩ bzw. ⟨-Cai⟩ des öfteren innerhalb einer Formenkategorie mit ⟨-Ci⟩ wechseln, wobei die letztere in der Regel einen in lautgeschichtlicher Hinsicht älteren Zustand vertritt, dann scheint der Schluß unvermeidlich, daß die ⟨-Cei⟩ bzw. ⟨-Cai⟩ geschriebene Variante durch die (fakultative) Diphthongierung *ĭ* > *ai̯* bedingt ist. In bezug auf das kurze auslautende **-i* läßt sich diese Annahme durch den Hinweis auf diejenigen apr. Belege plausibel machen, deren Auslautsdiphthong einer Auslautskürze des litauischen Gegenstücks gegenübersteht. Die hier in Frage kommenden diphthongierten Endungen gehören folgenden Kategorien an:

(1) Die athematische Endung der 1.P.Sg. Präs. *-mai*: *asmai* 8x "ich bin" < **asmi* < **esmi*. Vgl. alit. DP *ésmi*, *êssmi*, *ęsmi*, *ęssmi*.[11] Kein Nebenbeleg ⟨asmei⟩ bzw. ⟨asmi⟩. — Daran schließen sich die Belege der 2.P.Sg. Präs. *assai* 7x, *assei* 4x, *essei* 1x "du bist" < **asi* < **esi* (vgl. alit. DP *éssi*, *êssi*) an. Kein Nebenbeleg ⟨assi⟩.

(2) Der Ausgang der 3.P. Fut. *-sei* bzw. *-sai* < **-si*: *ēisei*, *postāsei*, *etskīsai* (s.o. § 4.1ff.).

(3) Der Ausgang der 3.P. Präs. *turei* 8x "soll, sollen", der neben einem nicht diphthongiertem *-i* in *turri* 18x (= lit. *tùri*) vorkommt.

(4) Die Endung des Dat.Sg. *mennei* "mir" < **meni* < **mani*,[12] die etymologisch zu alit. *mani* "mir" (DP *mani*, *mánig*), lit. ma. *mãni*, *màni* gehört. Kein Beleg ⟨menni⟩.

(5) Die Gerundia auf *-tei* < **-ti*: *giwāntei* "lebendig", *stānintei* "stehendt" (Nbb. *stāninti*). Daß der Ausgang hier eben als **-ti* anzusetzen ist, geht aus dem litauischen Vergleich hervor, wo Reflexivfor-

[11] Die altlitauischen Vergleichsbeispiele wurden Daukšas "Postille" entnommen und nach dem Index von KUDZINOWSKI 1977 angeführt.

[12] Vgl. *tennei* < **tanai* als Nom.Pl. zu *tans* "er".

men wie *juõkianti-s* < **juokianti-si*[13] im Verein mit ihren mundartlichen (dzukischen) Gegenstücken wie *juõkianc*, *gyvẽnanc*, *stóvinc* die Präsenz des Auslautssegments *-ti* beweisen.

(6) Vermutlich noch die Endung der 2.P.Pl. des Verbs: *-tei* 9x, *-tai* 8x < **-ti* (daneben *-ti*, *-ty*, insgesamt ca. 80x). Vgl. lit. *-te*, refl. *-tės*, daß nach VAN WIJK 1918, 61 mit dem apr. *-ti* identisch sein könnte.[14]

Vor diesem Hintergrund steht der Vermutung nichts im Wege, daß auch die als ⟨-sei⟩ bzw. ⟨-sai⟩ geschriebenen Ausgänge der 3.P.Sg. Permissiv auf ein ursprüngliches **-si* (vgl. die isolierten Belege *ebsignāsi*, *pokūnsi* § 6.3) zurückgehen.

Besprechung der Permissivbelege

6. Die Permissivformen, die hier als umgedeutete Futurformen interpretiert wurden (§ 2), werden im folgenden im Satzkontext und mit den deutschen bzw. altlitauischen Textstücken versehen dargestellt. Entsprechend den zwei Lautveränderungen, die für die Umgestaltung der Permissivendung **-si* verantwortlich sind (§§ 5.1 - 5.2), ist das Material auf zwei Listen zu verteilen. Die erste enthält die Belege mit gesenkter Endung ⟨-se⟩, die zweite die Belege mit diphthongierter Endung ⟨-sei⟩ bzw. ⟨-sai⟩. Die vereinzelten Belege auf ⟨-si⟩ finden sich auf der dritten Liste.

6.1. Die Belege mit ⟨-se⟩

boūse (1), **bouse** (1) = [bóu̯se] Fut. 3.Sg. "wird sein", hier i.S.v. dt. Konj. "sei". Nbf. *bousai* (1x), *boūsei* (3x), *bousei* (3x), *baūsei* (2x).

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[13] Das ist eine erstarrte Form des Dativs Sg. der konsonantischen Stämme, s. OTRĘBSKI 1956, 277.

[14] Schließlich ist zu beachten, daß es zwei vollkommen sichere Beispiele für die Diphthongierung **i* > *ai/ei* in der betonten Wurzelsilbe gibt. Vgl. (1) *polāikt* 115_5 Inf. "bleiben" < **palíkt* (= lit. *pailkti* dss.), vgl. 3.P. Präs. *polīnka* 97_{12} "bleibet", *polijnku* 37_6 "sie bleiben"), (2) *perrēist* 89_2 Inf. "verbinden" < **perríst*, dessen Bildung mit lit. *užrìšti* dss. und *pérrišti* "(mit einem Strick, Band) umbinden, -schnüren, (eine Wunde) verbinden" vergleichbar ist (ein nicht diphthongiertes *ris-* belegt hingegen *senrists* 59_9 "verbunden" :: lit. *sùrištas*).

6.2. Die Belege mit ⟨-sei⟩, ⟨-sai⟩

audasei (1x) = [auda:sei] Fut. 3.Sg. "(es) wird geschehen", hier i.S.v. dt. Konj. "(es) geschehe".

71 17 Kāigi tou druwēſe / tīt **audaſei** tebbei
[dt. Wie du gleubeſt / So geſchehe dir]
[alit. Kaip tu tiki / taipo taw **teſtoieſe** VE 32_1]

N.B. Mit Diphthongierung *-i* > *-ei* aus *[audá:si]. Eine solche Ausgangsform wird ebenfalls von den Reflexiva *audaseysin* und *audāsin* "(es) geschehe" < *[audá:si sin] vorausgesetzt (s.u.). Die lit. Vergleichsform ist *nusiduōs* Fut. impers. "es wird geschehen" < **nu-si-dúosi* (s. ferner § 6.1 s.v. *dase*).[23] — Das Präverb *au-* reflektiert samt slav. *u-* (vgl. čech. *udáti se* "sich ereignen", aksl. *umyti* "abwaschen")[24] und lat. *au-* (*auferre* "wegtragen") die Grammatikalisierung des uridg. Adverbs *$h_2$au* "herab, weg, fort" in seiner Eigenschaft als Adposition.

audaseysin (1x), **audasseisin** (1x) = [auda:sei sin],[25] Fut. refl. 3.Sg. "(es) wird geschehen", hier i.S.v. dt. Konj. "(es) geschehe". Eine nicht-reflexive Nebenform auf ⟨-ei⟩ ist *audasei*, s.o.

II 9 16 Tways quaits **audaſeyſin** 17 naſemmiey kay endengan
[dt. Deyn wille geſchehe auff erden als jm himmel]
I 9 16 Twais quaits **audaſſeiſin** na ſem(17)mey key audangon [l. *an°*]
[dt. Deyn wille geſchee auff erden als jm himmel]
[alit. **Buk** walia tawa kaip Dangui 5 taip ir Szeme VE 22_4f.]

Daneben **audāsin** (1) = [audá:sin], Fut. refl. 3.Sg. "(es) wird geschehen", hier i.S.v. dt. Konj. "(es) geschehe":

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[23] N. VAN WIJK 1929, 159f. sah in *-sei* von *audasei*, *boūsei* usw. eine zum Formans herabgesunkene Optativform der 3.P. apr. **sei* "sei" (vgl. 3.P.Sg. *seisei* "sei", 2.Pl. *seiti*, *seīti* "seid"). Dieser Annahme wurde später nicht gefolgt. M.M.n. lassen sich *sei-sei* (1x) und *sei-ti* (7x) plausibler als analogische Bildungen zur deutschen Z i t a t f o r m *sei* auffassen.

[24] Es fragt sich, ob das slavische Kompositum *ovadŭ* "Insekt" nicht als **au̯-ōd-as* analysiert werden kann, u.zw. mit *ov-* als vorvokalischem Allomorph zu *u-C* und mit **ōd-* als *o*-ablautendem Stamm zu **ēd-* "essen, fressen" (vgl. lit. *úodas* "Mücke" :: alit. *émi* "essen", lit. *édu* "fressen", aksl. *sŭněsti* "aufessen").

[25] Zum Langvokal gefolgt von konsonantischer Verdoppelung ⟨ss⟩ vgl. die Parallelbelege in der Anm. 18.

51 4 Stai Tirti [l. *Tirtai*] Maddla. 5 Twais Quāits **Audāſin** / kāgi [l. *kaigi*] Endan(6)gon tijt dēigi noſemien
[dt. Die Dritte Bitte. Dein Wille geſchehe / wie im Himmel / alſo auch auff Erden]
[alit. Treczas Praſchimas. 4 **Buk** walia tawa kaip Dangui 5 taip ir Szeme VE 22_3f.; III. *Buki* tawa walia kaip dągui taip ir ßemeie Mž 23_9]

N.B. Die Varianten *audaseysin*, *audasseisin* gehen mit Diphthongierung *-i* > *-ei* auf *[audá:**si**] + [sin] zurück. Der gleiche sekundäre Diphthong liegt auch im nicht-reflexiven Fut. *audasei* (s.o.) vor. Der einzige mit *audaseysin* zu vergleichende Beleg ist **mukin-sei-sin* "er lehre" < *[ma:kinsi] + [sin] (s.u.). — *audāsin* stellt m.E. eine lautliche Weiterentwicklung der genannten Ausgangsform dar. Sie erfolgte durch Synkope von *i* im Futursuffix *-si-* und Vereinfachung der daraus entstandenen Geminata *ss*: *[audá:**s**isin] > *[audá:ssin] > *[audá:sin]. Als Fut. refl. entspricht somit das apr. **au-dāsi-**sin*** dem litauischen Fut. *nusiduõs* "es wird geschehen" aus ****nu-si**-dúo-si* (s.o. s.v. *audasei*).[26] Daß im Apr. die Reflexivpartikel nachgestellt ist, erklärt sich als Neuerung gegenüber dem Lit., wo die alte Regel fortgesetzt wird, daß in zusammengesetzten Verben der Reflexivpartikel die Stelle gleich nach dem Präverb zukommt. Durch den Ansatz einer zugrunde liegenden Futurform auf *-si* (+ *sin*) erweisen sich die ständig wiederholten Versuche, *audāsin* von *audaseysin* zu trennen, u.zw. um das erstere aus einer Präsensform **audāst sin* "geschieht" herleiten zu können (s. SCHMID 1963, 49, neuerdings MAŽIULIS PEŽ I 111), als nutzlos. Der einzige Unterschied zu *audaseysin* besteht hier darin, daß *audāsin* eine Synkopierung desjenigen nachtonigen *ĭ* aufweist, das in *audaseysin* einer Diphthongierung unterlag. Daß eine Lautentwicklung hier zwei unterschiedliche Wege einschlug, braucht uns nicht zu wundern, da sich in genauer Parallele dazu einerseits ein diphthongiertes *turei*, andererseits ein

[26] Ähnlich, nur ohne auf die Synkopierung von *(dā)si* Bezug zu nehmen, bereits SPECHT 1928, 179 (Ansatz: **audās* + *sin*). Einem solchen Ansatz begegnet man später bei SCHMALSTIEG 1974, 213: «3rd fut. /audās sin/». Unnötigerweise schreibt aber SPECHT a.a.O. dem Segment *-ei* in der Nebenform *audaseysin* die Funktion einer Partikel zu, die sich nach ihm mit der Erweiterung *-ai* bei den litauischen mundartlichen Futurformen der 3.P. wie *bū́sai*, *pradésai* (S. 180) parallelisieren läßt. Nach dem heutigen Wissenstand kommt die *ai*-Partikel nur diejenigen Futurformen zu, die die durch *-ai* erweiterten, früher apokopierten Präsentien zur Seite haben, z.B. *sùks-ai* statt *sùks* in Analogie zum Präs. *sùk-ai* ⇐ *sùk* < *sùka*, vgl. ZINKEVIČIUS 1966, 430f. Das Fut. *bū́s-ai* "wird sein" kann als Ersatz für *bùs* < **bū̃s* < **bū́si* sein, wobei sich *bū́s°* nach den Pluralformen *bū́sime*, *-te* und die *ai*-Partikel nach dem Präs. *ỹrai* "ist" ⇐ *ỹr* < *yra* richtet. — Aufgrund der Doppelheit ⟨-sei⟩, ⟨-se⟩ hielt BERNEKER 1896, 227 *audāsin* für eine falsche Form statt **audāse-sin*. Aus graphemischer Sicht ist das fraglich, denn eine Schreibung ⟨se-sin⟩ stünde innerhalb der reflexiven Futura ganz isoliert da.

apokopiertes *tur* findet, die eine Doppelentwicklung aus ein und derselben Anfangsform *turri* "hat, soll" (= lit. *tùri*) darstellen.

boūsei (3x), **bousei** (3x) = [bóu̯sei], **baūsei** (2x) = [báu̯sei], **bousai** (1) = [bóu̯sai], Fut. 3.Sg. "er wird sein" bzw. "sie werden sein", hier i.S.v. dt. Konj. "sei, seien". Nbf. *boūse*, *bouse* (§ 6.1).

79 19 twais ʃwints Engels **baūʃei** ʃen māim
[dt. Dein heyliger Engel ʃey mit mir]
[alit. Tawa ʃchwentas Angelas **teʃto** su 4 manimi VE 36_{3}f.]

81 19 Twais Swints Engels **baūʃei** ʃen maim
[Dein Heiliger 17 Engel ʃey mit mir]
[alit. Tawa ʃchwentas Angelas **teʃto** ʃu manimi VE 37_{2}f.]

89 17 Erains **boūʃei** pokluʃman ʃteiʃei Aucktimmi(18)ʃkan
[dt. Jederman ʃey vnterthan der Obrigkeyt]
[alit. Koßnas ßmogus **teʃto** paduotas Wirauʃibei VE 40_{16}; Kaʃzna duʃcha maczems wireʃniams **teʃtawi** padota Mž 31_{18}f.]

91 20 Poʃkuleis tennans / kai ʃtai ʃteʃmu Miʃtran ... pokluʃmai bhe poʃeggīwin(22)gi **boūʃei**
[dt. Ermane ʃie / das ʃie dem Fuerʃten ... vnterthan vnnd gehorʃam ʃein [l. *seien*][27]]
[alit. Graudink yus / idant Hertzikems ... paduoti ir pakluʃni **butu** VE 41_{18}f.]

93 12 Stai Gennai **boūʃei** poklūʃmingi ʃwaiʃei Wī(13)rans
[dt. Die Weiber ʃeyen vnterthan jren Mennern]
[alit. Moteris **bukiet** paduotas wirams yuʃʃu kaipo Ponui VE 42_{10}f.; Materis tikrims wirams **bukiet** padotas kaipo ir Panui Mž 34_{3}f.]

95 17 ʃtan wīrʃt tans pogauuns / ʃtas **bouʃai** waix 18 adder powīrps
[dt. das wird er empfahen / Er ʃey Knecht oder Frey]
[alit. tatai ghis gaus **Norint** Tarnas / **norint** Walnas VE 43_{14}; tatai nog Diewa tur turieti **iei narinti** tarnas alba ʃamdinikas **butu** Mž 37_{2}f.]

101 10 As quoi ʃteʃmu ainan 11 pogalban teckint kawida ʃurgi tennen **boūʃei**
[dt. Jch will jm einen Gehuelffen machen die vmb jn ʃey]
[alit. **padariʃiu** yem pagalba werta yamui / kuri prieg io' **butu** VE 50_{15}f.]

103 13 Schlait kai ʃtai Swin(14)tai **bouʃei** / bhe niebwinūtei
[dt. ʃondern das ʃie Heilig ʃey / vnd vnʃtrefflich]
[alit. Bet idant **butu** ʃchwenta ir be kaltibes VE 51_{17}]

103 20 Stai gannai **bouʃei** pomeʃton ʃwaain [!] 21 wijrin
[dt. Die Weiber ʃein [l. *seien*] vntethan jren Mennern]
[alit. Moteris paduotas **buket** ʃawa Wirams kaipo Ponui VE 52_{1}]

[27] Beachte die umgekehrte Folge der Adjektive in der apr. Übersetzung.

97 20 Erains **mukinſuſin** [!] ſwaian mukinſnan / 21 Tīt wīrſt [—] labbai ſtalliuns enſtan buttan
[dt. Ein jeder lern ſein Lection / So wird es wol im hauſe ſton]
[alit. **Mokikes** pilnai tū mokſlū / 20 Jey nori perßegnots buti VE 44_{19}f.]

N.B. Sonst gibt es für das Fut. refl. bloß einen einzigen Beleg: *audaseysin* "(es) geschehe" (s.o.). Analyse: *mukin-sei + sin*. — Es handelt sich um eine auf dem Infinitivstamm **mukint sin* "lernen" (s. *mukint*) aufbauende Futurform **mukin-si*, dessen Suffix einer Diphthongierung in ⟨-sei⟩, u.zw. ähnlich wie im Typus von *boūsei* (s.o.) unterlag. Rekonstruktion *[ma:kinsi sin], vgl. *mukinna*. Vergleichsform: lit. *mokinúos*, *mokìntis* "lernen, studieren, in die Schule gehen" als Refl. zu *mokìnti* tr. "lehren, unterrichten, schulen".

pareysey (1x) = [pareisei] Fut. 3.Sg. "wird zukommen", hier i.S.v. dt. Konj. "zukomme".

II 9 15 **Pareyſey** noumans twayia ryeky
[dt. Zukomme [—] dein Reych]
[alit. **Ateik** Karaliſta tawa VE 21_{14}; **Ateik** karaliſte tawa Mž 23_{8}]

Daneben ein bedeutungsgleiches **pergeis** (1x) = [perjeis].[29]

I 9 15 **Pergeis** twais læims
[dt. Zukomme dein Reich]

N.B. Läßt man den Futurmarker *-sei* durch Diphthongierung aus **-si* herkommen, dann ergibt sich **par-ei-si* bzw. **per-ei-si* als Ausgangsform. Vgl. lit. *pareĩsime*, *péreisime*. — Was die Variante *pergeis* anbelangt, so ist dabei in Anbetracht auf die vereinzelt anzutreffende Apokopierung *-si* > *-s* (vgl. *teĩks mennei* "stelle mir!" aus **teik-si*; *audāsin* < **audāssin* < **audāsi sin* "wird geschehen", s.o. s.v.) eine Entwicklung aus *[perjeisi] ⇐ *[per-ei-si] zu vermuten. Das *j* im Wurzelanlaut wurde offenbar nach dem Simplex *jeis* (*jeiti*) eingeführt. — In gleicher Bed. "zukomme" liegen noch die Formen *perēit* und *perēilai* vor.

seggēsei (1x) Fut. 3.Sg. "wird tun", hier in der Funktion der 2.Sg. "wirst tun" (in Entsprechung ggü. dt. Präs. "tust").

SCHMALSTIEG 1974, 189 erschließt daraus /ma:kinsaisin/. Auffälligerweise fehlt das Lemma in MAŽIULIS PEŽ III 156, obwohl ders. Autor früher in PKP II 192 Anm. 542. die Konjektur ⟨mukinſeiſin⟩ als "möglich" in Betracht gezogen hat.

[29] Oder auch [pergeis], vgl. die Lautform *merg-* "Magd, Jungfrau" aus **merj-* (Verf. 2000a, 56f.).

Hinblick auf die permissivische Bedeutung der Form die Möglichkeit besteht, daß *pokūnti* aus ⟨pokūnſi⟩ entstellt wurde.[30] Vgl.:

123 1 Stas Rikijs **pokūnti** [!] twai(2)an Eneiſſannien bhe iſeis(3)ennien
Der Herr beware deinen Eingang vnnd Außgang
[alit. Wieſchpatis **teapſaugō** tawa jeghima ir iſcheghima VE 62_{21}f.; Wieſchpatis **teapſaugo** tawa Jneghima īr Jſchegima FCh 106_{4}f.]

N.B. Sollte es sich indessen bei *pokūnti* 123_{1} um einen korrekten Beleg handeln, u.zw. eine mit *pokūnti* 41_{11} "behütet" identische Form des Ind.Präs., dann entspricht der konjunktivische Gebrauch dieses Indikativs dem von *perēit* 49_{14} "komme".

Übersicht über die etymologischen Futurformen des Apr.

⟨-si⟩	**⟨-se⟩**	**⟨-sei⟩**	**⟨-sai⟩**
	boūse 1	*boūsei* 3	*bousai* 1
	bouse 1	*bousei* 3	
		baūsei 2	
*dāsi	*dase* 2	*audasei* 1	*dāsai* 1
(*audāsin* 1)		*audassei-sin* 1	
		audasey-sin 1	
ebsignāsi 1			
		ēisei 1	
(*pergeis* 1)		*pareysey* 1	
			etskīsai 1
	galbse 3		*galbsai* 1
gīwasi 1			
giwassi 1			
		**mukinsei-sin* 1	

[30] Eine Vertauschung der Buchstaben ⟨t⟩ und ⟨ſ⟩ bezeugen die Belege wie 1. *paſtagis* EV 443 "Schwanzriemen" für ⟨paſſagis⟩, vgl. lit. *pāsagas* m. oder *pasagà* f. "Bauchriemen; Sattelgurt", 2. *layſo* EV 27 «let» ["Letten, Ton, Tonerde"] für ⟨layto⟩ (dies ist mit lit. *laĩtas* "Lehmklumpen zum Ausstreichen von Löchern im Ofen oder Rissen im Dreschboden", *laĩtinti* "verkitten, mit Lehm verstreichen" zu vergleichen), 3. *plaſmeno* EV 148 «fueſbret» ["die untere Fläche des Fußes zwischen dessen Mitte und Zehen"] für ⟨platmeno⟩, vgl. lit. *platmenà* "breiteste, weiteste Stelle (an einem Gegenstand)". — Aus den alit. Texten vgl. etwa *ſchiſtu* Mž 35_{1} für ⟨ſchittu⟩.

⟨-si⟩	⟨-se⟩	⟨-sei⟩	⟨-sai⟩
pokūnsi 1			
		postāsei 2	
		seggēsei 1	
(*teīks* 1)			
	tussīse 1		
	wirse 1		

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Abgekürzt zitierte Sprachdenkmäler

I, II, III = *Die Katechismen*: I von 1545, II von 1545, III von 1561 (= Enchiridion). Zitiert nach MAŽIULIS PKP II, 65ff.

DP = *Daukšos "Postilė"* (1599). Zitiert nach KUDZINOWSKI 1977.

EV = *Das Elbinger deutsch-preußische Vokabular*. Zitiert nach der Photokopie in MAŽIULIS PKP I, 59-75.

FCh = *"Forma Chrikstima"* (1559). Zitiert nach Georg GERULLIS, *Mažvydas. Seniausieji lietuvių kalbos paminklai iki 1570 metams*, Kaunas: Švietimo ministerijos leidinys, 1922, S. 95ff.

Gr (A, F, G, H) = *Das preußische Vokabular des Simon Grunau* (ca. 1517--1526). Zitiert nach MAŽIULIS PKP II, 47-61.

Mž = Martynas MAŽVYDAS, *Katekizmas ir kiti raštai*, hg. von Giedrius SUBAČIUS. Vilnius: Baltos lankos, 1993. (Bibliotheca Baltica, Lithuania.)

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On PIE Full Grades in Some Zero-Grade Contexts: **-tí-, *-tó-*

BRENT VINE

1. Background.

1.1. Despite the fact that primary *ti*-stems (nomina actionis, abstracta) generally appear with zero grade of the root (Ved. *matí-* 'thought, devotion', etc.), it seems to be all but universally assumed that such formations originally inflected according to the proterokinetic pattern, with full-grade root and zero grade of the suffix in strong forms, and zero-grade root with full grade of the suffix in weak forms.[1] The matter has recently been discussed in a particularly clear and useful way by M. MEIER-BRÜGGER (2000: 194f.).

Proterokinetic inflection as such, however, is not directly attested for *ti*-stems. Thus, it is normally assumed that zero grade of the root, the oxytone accentuation characteristic of the weak stem, and the zero-grade suffix of the strong stem have all been generalized, thus yielding the typical einzelsprachlich appearance of primary *ti*-stems — i.e., a generalized "R(Ø)-tí-" (as in Ved. *matí-* etc.).

1.2. Two types of more or less direct evidence are usually cited in favor of these assumptions. For the root syllable, we have accented zero grades of the type Ved. *gáti-* 'moving', *śrúti-* 'hearing', etc.,[2] which are thought to point in the direction of the original accented full grade. For the suffix, we have several bits of evidence (all recently discussed by MEIER-BRÜGGER, loc. cit.), pointing to a full-grade suffix in weak cases and (less directly) to a full-grade root in strong cases:

(i) Vedic gen. sg. *-tés*

(ii) Gk. (Att.) gen. sg. -σεως (with quantitative metathesis; *-ē-* perhaps from loc.sg. **-ēi*), dat.sg. -σει

[1] In the formalism used here for convenience: strong R(é)-ti- ~ weak R(Ø)-téi̯- ("R" = root).

[2] Listed in LUBOTSKY (1988: 34f.).

(iii) Ved. acc. Pl. *matī́s* (implying, in its paradigmatic context, **mán-ti-ns*)

1.3. At least according to the older handbooks, still more direct traces of full-grade/zero-grade ablaut have been seen in a few parallel forms of the type Att. δέρρις 'skin, hide' : δάρσις 'tearing, separation' (Gal.), Ion. [Hdt.] ἄγερσις 'assembly' : W.Ion. ἄγαρρις, cf. Arc. πανάγορσις, Hsch. ἄγορρις (e.g. SCHWYZER 1939: 505, following PEDERSEN). But none of these alleged relics is compelling: most of them are better explained in other ways,[3] especially given the documented tendency of Greek to develop postverbal full grades for original zero grades, of the type φεῦξις 'flight' (Soph.) ← φεύγω 'flee' (vs. Hom. φύξις).[4] In a similar way, some other full-grade *ti*-stem forms have long been suspected of having arisen secondarily, as with some Indic forms found beside parallel full-grade *tu*-stems (see e.g. LIEBERT 1949: 50-1 on Ved. *tantí-* 'cord' : *tántu-* 'thread').

1.4. Given, then, the relatively sparse direct evidence for the proterokinetic inflection of *ti*-stems, together with the nearly canonic zero grade of the root that appears throughout Indo-European, it is not surprising that the generalization of the zero-grade root in the strong forms is often thought to have occurred quite early, as in H. RIX's formulation: "Vollstufe der Wurzel (Nom.Akk.) ist wohl schon spät- idg. durch Schwundstufe ersetzt" (1992: 146). In a more extreme way, some scholars have gone so far as to deny the existence of any evidence at all for a mobile inflection: thus, according to A. SIHLER, "there is no actual evidence for tonic kinesis" (1995: 279). But it seems to be largely unremarked, in such discussions, that there is a class of full-grade *ti*-stems — or actually, two related or overlapping subclasses of such forms — that is in fact rather well-attested. I refer, to begin with, to the first members of τερψίμβροτος compounds, where "CéH-ti-" forms (of the type RV *dā́tivāra-* 'freigebig') are prominent.

This material calls for two important qualifications at the outset, the first of which concerns the nature of the first members in question. While it is generally agreed that the core of this formation does indeed

[3] Thus δέρρις may not in fact reflect *δέρσις, but could show expressive gemination (see FRISK 1.369, s.v. δέρω, with further references).

[4] Hence, in fact, ἄγερσις, easily secondary to ἀγείρω 'gather, collect' (cf. CHANTRAINE 1933: 280, including ἔγερσις ← ἐγείρω, among other such forms).

involve primary *ti*-stems, G. DUNKEL has argued (in my view rather persuasively) for a "polygenetic" origin (DUNKEL 1992), whereby several other types of formation besides primary *ti*-stems have contributed to the body of so-called *τερψίμβροτος* compounds. But this polygenesis should not be a factor here, since the *τερψίμβροτος* first members to be treated below are in general not to be accounted for as adverbial forms, imperatives, or, in short, anything other than *ti*-stems. The second qualification involves the standard assumption (see e.g. SCHINDLER 1997: 539) that many of the full grades found as *τερψίμβροτος* first members are secondary in one way or another, typically related to (synchronically) full-grade verbal stems (such as *s*-aorists). Dunkel has argued (again persuasively, in my view) that Greek forms of this sort are in general sigmatic. Thus, since I will mainly refer to Greek forms with unassibilated *-t-*, the potential complicating factor of secondary full grades should likewise not enter the picture in any significant way. My initial claim will be, quite simply, that among *τερψίμβροτος* first members that have the appearance of continuing old *ti*-stems, full-grade forms built to laryngeal-final roots of the shape "CeH-" have a certain prominence, cf. the Vedic Musterbeispiel *dā́tivāra-* cited above, whose first member has the same structure as a Homeric form like *βωτιάνειρα* 'nourishing men' (A 155) < *$^{*}g^{w}eh_{3}$-ti˙*.[5]

There exist, moreover, at least a few archaic-looking simplex forms of exactly the same type, such as the *ti*-stem *$^{*}méh_{1}$-ti-* (: *$^{*}meh_{1}$-* 'measure') that underlies Hom. *μῆτις* and other forms (RV *-māti-*, Lat. *mēti[or]*, OE *mǣþ*). I will suggest, then, that there may be something

[5] The idea that this form, like *ὠλεσίκαρποι* 'shedding fruit' (*κ* 510), shows an "Aeolic" reflex of metrical lengthening (i.e. *βωτι˙*, *ὠλεσι˙* for expected ***βουτι˙*, ***οὐλεσι˙*; thus HOUSEHOLDER and NAGY 1972: 68, apparently followed by JANKO 1992: 17n30), has little to recommend it. As seen by SCHULZE, SOLMSEN and others, there are a number of secondary sources for the *ὠ-* of *ὠλεσίκαρποι* (see WYATT 1969: 61-3); indeed, one such source or contributing factor might be the more archaic type of *τερψίμβροτος* compound seen in *βωτιάνειρα* itself (vs. *βόσιν* T 268), which, unlike *ὠλεσίκαρποι*, has an identifiable historical source for the *-ω-* — namely, the type Ved. *dā́tivāra-*, and full-grade simplex "CéH-ti-" forms more generally (see the immediately following text).

systematic in the relatively clear-cut survival of full-grade *ti*-stems of exactly this sort.[6]

1.5. There is nothing surprising or problematic as such about a correlation between root structure and a particular morphological category — a feature otherwise familiar, for example, in the Indo- European root noun, as highlighted by SCHINDLER (1972a, 1972b) and many others since. Such potential correlations, however, deserve to be verified, investigated, and (if possible) accounted for. In the present case, the issue is also to be viewed in connection with the broader question of how to account for the special nature of *ti*-stem inflection as we actually find it (§§1.1.-1.4.), i.e., with relatively little evidence for full-grade roots apart from several phonotactically restricted subsets, such as roots ending in a laryngeal.

To conclude the introductory exposition, I suggest further that this pattern (i.e., "late IE" CéH-ti- ~ R(Ø)-tí-) may not be entirely isolated, since similar behavior can be found among verbal adjectives in *-*tó*- (i.e., CeH-to- ~ R(Ø)-tó-). On the face of it, such a comparison may seem surprising: an oxytone thematic (and therefore non-ablauting) formation with canonic zero-grade of the root is after all quite different from an athematic formation that is assumed to have been ablauting, at least at some stage of the protolanguage. But in terms of the late Indo-European descriptive profile of *ti*-stems, we do in effect have a nearly canonic oxytone formation with almost pervasive zero grade of the root, and this is the sense in which I propose to examine the comparison with formations in *-*tó*-.

2. Full-grade *-*tó*- (especially C(R)eH-tó-)

2.1. In considering full-grade verbal adjectives in *-*tó*-, it should be clear that certain types of forms are not of interest. We can exclude, for example, familiar obstruent-cluster substitutions TT-tó- → TeT-tó- (**pek*^{w}-*tó*-, **seĝ*^{h}-*tó*-, etc.). Also excluded here are various substantivizations with secondary full grade, such as result nouns with *e*-grade

[6] I cannot agree with RUIJGH (1997: 267) that μῆτις is actually the phonologically regular result of a zero-grade **m̥h*$_1$-*ti*-. But even if this development should turn out to be correct for Greek, there can be little doubt about the existence of a full-grade **méh*$_1$-*ti*- (cf Lat. *mētior* etc.).

(*$\hat{k}$léu̯-to- 'sound' [Av. *sraota-*], etc.) or *o*-grade (*νόστος* 'return', etc.).

2.2. What remains is a rather well-attested body of full- grade verbal adjectives with root-final laryngeal, although the pattern does not seem to have attracted much notice. The limited attention accorded such material has mainly been directed to those forms with resonant or glide after the initial stop (i.e., "CReH-to-" forms): in general, these have traditionally been taken to reflect secondary (and relatively late, indeed mostly einzelsprachlich) creations, no doubt correctly in many instances.[7] Thus, despite some apparent equations (Lat. *nētus* : Hom. *ἐΰννητος*, Lat. *-pōtus*, *nōtus* : Ved. *prātá*, *jñātá-*, etc.), a series of such forms in Latin can be satisfactorily accounted for on the basis of full grades elsewhere in the system, typically in long-vowel perfectum forms that go back to active root aorists: Lat. *nētus*, *-plētus*, *nōtus*, *crētus*, *sprētus* etc. (for phonologically regular ***nātus*, ***-plātus* etc.) after *nēvī*, *-plēvī*, *nōscō*/*nōvī*, etc. (cf. SCHRIJVER 1991: 340f.).

2.3. It has occasionally been suggested that a few forms of this sort may be relatively old, as with F. O. LINDEMAN's claim (1997: 98ff.) that a number of these items should be reconstructed for "some stage of the protolanguage" (citing apparent equations like Lat. *-plētus*: Ved. *prātá-* : [?] Arm. *li* and *nōtus* : *jñātá-* : *γνωτός*). While I am not in sympathy with the use to which LINDEMAN has put such forms,[8] it still seems legitimate to consider, on its own terms, the question of whether some of them may indeed be inherited.

One interesting group involves forms that correlate with a 4th-class or *i̯e/o*-present, where full grade for laryngeal-final roots was apparently normal; e.g.:

(i) *$pleh_3$- 'swim, flow' (LIV 437: aor. ἀπέπλω) πλώω : πλωτός.

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[7] See in general WACKERNAGEL-DEBRUNNER II.2: 565ff., KURYŁOWICZ 1956: 251f.

[8] LINDEMAN adduces them as ammunition against the triple representation of laryngeals in Greek: if a form like Lat. *-plētus* beside Ved. *prātá-* is an old state II full grade, then (in LINDEMAN's view) a form like *-γνητός* (in *κασίγνητος*) could equally well be a state II full grade and not a zero grade, and similarly for alleged zero-grade forms built to roots ending in the other two laryngeals.

(ii) ReH-: *Rātá-*	*yātá-* (*yā-* 'go')
	-yāta- (*yā-* 'eifrig suchen', **§2.6.**)
	rātá- (*rā-* 'give')[17]

Although the numbers are not large, the distributional pattern for CeH- roots appears to be complementary: if the first consonant of the root is a non-sonorant obstruent or an obstruent cluster, the result is the regular and predicted zero grade of the root, with vocalized laryngeal, as in *-dita-*, *hitá-*, *sitá-* etc. (including *jahitá-*, with secondary reduplication); but if the first consonant is a sonorant, the full grade appears, as in both versions of *yātá-* and in *rātá-*.[18]

There are indications of similar behavior elsewhere, although these deserve more extended treatment than can be provided here, and much of the material is in some respects equivocal.[19] The essential point for now is the suggestion that the Vedic pattern in (i) vs. (ii) above may be relatively old, such that full-grade "substitutes" like Ved. *yātá-*/*-yāta-*, *rātá-*, Av. *yāta-*, *rāta-*, and OP *māta-* reflect the earlier core of a process that ultimately results in generalized full grades for forms with intial stop such as Av./OP *dāta-*, OP *pāta-*, and late Ved.

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[17] On the original sense of this root in IE see now MELCHERT 1999a.

[18] In the Rig-Veda, the only two exceptions to this pattern appear to be *tvā́dāta-* (modeled after *tvā́datta-*, which has a reduplicated form similar to *jahitá-*, except with laryngeal loss), and *-mita-* (*mā-* 'measure'), which occurs once in a patently late hymn (I.164.45a) and a second time in a hymn that may not be much older (VI.7.6a). For the secondary status of *-mita-* (*párimitā* I.164.45a, *vímitāni* VI.7.6a), it may also be significant that in the Rig-Veda, *Rātá-* forms never occur with preverb, while the *Titá-* forms are attested much more commonly with preverb than without (approx. 2:1). Insofar as compounded **-tó-* is an archaic feature (MEILLET 1929), this seems to confirm the relatively late character of the *Rātá-* forms.

[19] In Gmc., e.g. OE *mǣþ* n. 'mowing' < **[h$_2$]méh$_1$-to-* (with accent retraction, perhaps associated with the substantivization) contrasts with ordinary zero-grade forms like OE *sæd*, Go. *sad*, OHG *sat* satisfied' < **sh$_2$-tó-*. In Latin, note the problematic status of forms like *ratus* (: *rērī* 'think'), **lato-* (cf. *latēre* 'lie hidden') and **nato-* (cf. *natāre* 'swim'), which could be analogical substitutes ("morphological zero grades") modeled on normal zero grades like *datus*, *status*, *satus*, **fato-* (: *fatērī* 'assert') etc. (cf. Ved. *mita-* above), although such forms are also considered by some simply to reflect the regular phonological development of inherited zero grades (see e.g. SCHRIJVER 1991: 171, and B. IRSLINGER [this volume]).

ment', Go. *wasti* 'id.', Skt. *vastí-* 'fringe' [gramm. only].[22] Similarly, a **nés-ti-* (to **nes-* 'return') is at least old within Greek, to judge from Myc. *Ne-ti-ja-no /Nesti(i)-ānōr/*.[23] Thus, we could again suppose a secondary substitution of full grade roots for the samprasāraṇa zero grades in the weak stems ***us-téi̯-* and ***n̥s-téi̯-*, which might have been disfavored (cf. R̥H-téi̯- above, **§3.1.**). On the other hand, such zero grades certainly exist elsewhere for these roots,[24] so that other explanations should also be considered. For **u̯és-ti-*, we have an acrostatic middle present **u̯és-toi* (Hitt. *wēsta* etc., LIV 633), which, as a category with persistent full grade of the root vis-à-vis ordinary middles, could perhaps have influenced (or otherwise have been regularly correlated with) the full-grade verbal abstract, as already noted for this item by SCHINDLER (1994: 398). For **nés-ti-* (actually **nés-ti**) we should consider another factor, namely the status of this form as the first member of a *τερψίμβροτος* compound, which returns us to one of the points made at the outset (**§1.4.**), concerning the prominence of CéH-ti- forms precisely in this category. In the remainder of this paper, then, I consider full-grade *ti*-stems from the perspective of original compound formations, beginning with some further observations about CéH-ti- forms and *τερψίμβροτος* compounds.

3.3. The best actual word-equation for a *τερψίμβροτος* compound involves a CéH-ti- form, i.e. the **déh₃-ti-* of RV *dā́tivāra-* (**§1.4.** above) beside the δωτ(ι)* implied by the Kurzname Δωτώ (which must stand, as has long been assumed, for Δωτι-κλέης vel sim., cf. KNECHT 1946: 11); cf. also OCS *blago-datĭ* grace, Av. *-dāiti-* 'giving'. Some of the Homeric forms of this sort, such as the *βωτι** already mentioned

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[22] Other material here is less certain, e.g. Hsch. *γεστία*, normally emended to *γέστρα* and compared with Skt. *vástram*. (Toch. B *wastsi*, sometimes also adduced in this connection, is simply the regular infinitive of *wäs-* 'clothe').

[23] The Mycenaean form is directly comparable, mutatis mutandis, to Thess. Νέσσανδρος (cf. GARCÍA RAMÓN 1999b: 526). A further index of the antiquity of **nés-ti-* may be found in the early Gk. **késti-* (< **kéns-ti-*) of Myc. *Ke-sa-do-ro/ra* /Kessandros, -rā/, which may owe its form to the parallel **nés-ti-* compound. See in detail GARCÍA RAMÓN 1992.

[24] Though rarely, and not without controversy in some cases: thus e.g. Ved. *ásta-* n. 'home' (substantivized **-n̥s-tó-*, with accent retraction) seems assured, although the ultimate meaning and analysis of Hom. *ἄσμενος* and the etymology of Skt. *(sv)astí-* are less clear; for the latter, cf. MEIER-BRÜGGER 1979 (**n̥s-ti-*) vs. the traditional derivation via **h₁es-ti-* (e.g. WATKINS 2000: 24).

There is in any case no lack of CéH-ti- forms beyond those already mentioned, many of which appear relatively isolated within their traditions and may well be archaic. Without attempting an exhaustive presentation (much of the material is readily available in LIEBERT 1949, and for Indo-Iranian see now TREMBLAY 1999: 53ff., 71ff.), it may be helpful to provide some characteristic examples. In Indo-Iranian, we find Ved. *rātí-* 'gift' ~ Av. *rāiti-* 'generosity' (*(H)réh$_1$-ti-), Ved. *sphātí-* 'fattening' (*spéh$_2$-ti-[30]), Av. *hāiti-* 'section' < *'binding' (*séh$_2$-ti-). Beside Ved. *sphātí-*, note also the Gmc. *spōdi- of OHG *spuot*, OE *spēd* 'success'[31] — evidently an oxytone formation, vs. the barytone type Go. *ga-kumþs* (: Ved. *gáti-*).[32] Some additional examples: *(s)téh$_2$-ti- (: *(s)teh$_2$(i)- 'steal') in OIr. *táid,* OCS *tatĭ* 'thief'; *péh$_3$-ti- (*peh$_3$(i)- 'drink') in ἀνάπωτις [Pi.], ἄμπωτις [Hdt.+] 'ebb' (cf. also Lat. *pōtiō*, though this can be secondary); *séh$_1$-ti- (: *seh$_1$- 'sow') in Germanic (OE *sǣd* 'seed', Go. *mana-seþs* 'mankind', etc.).

3.4. Given the existence of such forms, together with the parallel appearance of some of them in the context of τερψίμβροτος first members (§§**1.4.**, **3.2.**, **3.3.**), we can pursue the implications of this convergence by considering next the question of the original accentuation of τερψίμβροτος compounds. Unfortunately, this is not entirely clear: only the Vedic evidence is of any value, and the data are meager and contradictory.[33] Nevertheless, it is surely most reasonable to assume that full-grade first members had accent on the root, as appears directly in

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with *latti-* continuing zero-grade *d^{h}h$_1$-tí- while *tuzzi-* shows the productive replacement with *-u-ti- (OETTINGER 1994: 313n27, with further references). For *tukzi-*, MELCHERT himself already noted the generalized *dúk-ti- for the Germanic and Latin comparanda, vs. the expected proterokinetic *déu̯k-ti-/*duk-tei̯- (1999b: 23n30). As he also points out, one or another of these forms could have been produced independently, given the productivity of *-ti-. But from the point of view of the conception of *ti*-stems being developed here, the phonotactic and apophonic contrast between *d^{h}éh$_1$-ti- and *dúk-ti- (as apparently preserved in Anatolian) is precisely to be expected.

[30] I follow the "Cornell" reconstruction of this root (vs., e.g., LIV *sp^{h}eh$_1$-), see NUSSBAUM apud JASANOFF 1994: 160nl9.

[31] For the *o*-grade, cf. OE *spōwan* etc. (and further **§3.7.** below).

[32] For traces of a Verner variant *kundi- see RASMUSSEN 1983[1999]: 87.

[33] See WACKERNAGEL-DEBRUNNER II.1.320.

3.5. Such a decompositional scenario calls to mind the traditional conception of *ti*-stems as having been primordially compositional (and in systematic opposition to simplex *tu*-stems), as argued in several classic papers by MEILLET and others,[38] though generally with reference to *ti*-stems as second members of compounds, not first members. An updated version of this theory has recently been defended by B. A. OLSEN and J. E. RASMUSSEN (1999, see also RASMUSSEN in this volume). This claim has been vigorously disputed (see in *extenso* LIEBERT 1949: 149ff., with earlier references), and there is no question of attempting to settle the matter here. But whether or not *ti*-stems were *exclusively* compositional in origin, it would be difficult to deny a significant degree of compositional behavior for this formant, beginning from a very early period.[39] As the second member of compounds, **-ti-* is regularly unaccented.[40] If this behavior is old, as it seems to be, it would help to account for the generalization of zero grade of the root and the suffix in simplex *ti*-stems.[41] Viewed in this light, a form like Ved. *matís* (cf. **§1.2.**(iii) above) might have less to do with an original proterokinetic **mán-ti-ns* than with a zero-grade second member of a compound *˚*mn̥-ti-* (whence secondarily oxytone **mn̥-tí-*), as is in fact well-attested for this form (Go. *ga-munds,* Li. *at-mintìs*, OCS *pa-mętĭ*, Lat. *āmēns/dēmēns*[42]). Note further that for second-member *ti*-stem zero grades of CeH- roots (i.e. ˚CH-ti-), laryngeal loss would have been phonologically regular, as in Ved. *bhága-tti-* 'generous gift' (with the same treatment as in ˚CH-to-: Ved. *ā́-tta-* to *dā-* 'give', etc.). It is perhaps not surprising, then, that we find at least one ˚CeH-ti- form (RV *havyá-dāti-* 'presenting oblations'), in which the full grade has presumably been restored after the corresponding CeH-ti˚ compound (cf. RV *dā́tivara-*), and/or a simplex CeH-ti- abstract (Ved. ***dāti-*), if

[38] See especially MEILLET 1925; additional references in WACKERNAGEL-DEBRUNNER II.2.634.

[39] As a variant (and this is the position of OLSEN and RASMUSSEN): even if **-ti-* was at first exclusively compositional, simplex **-ti-* is already established by late IE.

[40] WACKERNAGEL-DEBRUNNER II.1.214.

[41] Similarly OLSEN and RASMUSSEN, though with some different assumptions about the suffix.

[42] See ERNOUT-MEILLET s.v. *meminī*.

such a form existed in the Vedic or pre-Vedic period (cf. Av. _dāiti-_ and OCS _blago-datĭ_).

Consider, finally, that if we take the more extreme position that _ti_-stems were in origin exclusively compositional, this could mean that the proterokinetic inflection this class displays, while real enough, would have arisen in an entirely secondary way, i.e., as a result of providing a simplex inflectional paradigm to first-member full grades and second-member zero grades. According to OLSEN and RASMUSSEN (1999: 424), the non-canonic "semi-proterokinetic" inflection of _ti_-stems as we actually find them in the late IE type _*mn̥-ti-/*mn-téi̯-_, _*g^{w}m̥-ti-/*g^{w}m̥-téi̯-_, etc., arose secondarily after the inflection of _tu_-stems (a proterokinetic type originally at home in simplicia, but serving as a derivational base for _ti_-stem compounds, cf. above). This could well have been a factor — cf. **§1.3.** on possible cases of this sort at the einzelsprachlich level — and yet such an explanation would not account for the full-grade CéH-ti- forms, among other _ti_-stem full grades (such as Cés-ti-, and even _*mén-ti-_, as in Go. _ana-minds_ 'supposition', and perhaps Skt. _manti-_ [gramm.], a type of full-grade _ti_-stem structure that is attested with a certain frequency in Indo-Iranian,[43] and similar to the _*ĝénh$_1$-ti-_ 'birth, generation' that may be reconstructable for PIE,[44] beside other possible forms with that structure.[45])[46]. A final

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[43] Ved. _tantí-_, _ránti-_ etc., see LIEBERT 1949: 72ff., 108f. This pattern, which can hardly be old (though it may owe its extension to an old prototype), calls to mind the full-grade _ro_-stems to _Tand-_ roots (Ved. _átandra-_ 'untiring', _candrá-_ 'brilliant', etc.), which I discuss elsewhere (2002: 330, 344f., with further references).

[44] Av. _frazaiṇti-_, Gmc. _*kindi-_ (Go. _kindins_ 'governor'), OCS _zętĭ_, etc. (LIEBERT 1949: 107), but not necessarily Gk. γένεσις, which could simply reflect secondarily stressed _*ĝn̥̍h$_1$-ti-_. (For an analysis of _*ĝénh$_1$-ti-_ in terms of a corresponding acrostatic middle — cf. _*u̯és-tor_ : _*u̯és-ti-_ above, **§3.2.** — see SCHINDLER 1994: 399.) Whether Lat. _genti-_ (nom. _gēns_ 'nation') belongs here remains unclear, given the absence of laryngeal reflex (vs. the zero grade in Lat. _nātiō_); SCHRIJVER may be correct in taking _genti-_ as a late creation (1991: 330, following ERNOUT-MEILLET).

[45] Cf. the possible _*h$_1$énh$_3$-ti-_ of Gk. ἐνοσι-, although the case is ambiguous, as noted recently by JANDA (1999: 187f.). The τερψίμβροτος formation, however, is noteworthy (ἐνοσίχθων etc.).

[46] Even without considering various TéT-ti- forms (e.g. _*kéd-ti-_ in Lat. _cessim_ 'gradually', _necesse_ 'unavoidable') or others with still more complex clusters whose full grades can also be secondary (e.g. _*rézg-ti-_ in Lat. _restis_ 'cord', cf. Li. _rezgù_ 'plait'), still other full-grade _ti_-stems are met with synchronically, without

complicating factor is that the connections between *to*-participles and *ti*-stems are to some degree very tight (thus explicitly MEILLET 1929: 639), with the result that it is not always easy to interpret the derivational relationships between parallel *ti*-stems and verbal adjectives in **-to-*: cf. Lat. *pōtus*/*pōtiō* (**§2.5.**), Ved. *rātá-*/*rātí-* (**§2.7.**), Gk. ˚*πᾱ[σ]το-*/*πᾱσι-*, ˚*κτᾱτο-*/*κτᾱσι*˚ (**§2.4.**(iv)), etc.[47]

3.6. The general conclusions to be drawn from this discussion can be summarized briefly. I have attempted to highlight a type of problem in Indo-European word formation that arises directly from the dramatic advances of recent decades in our understanding of accent and ablaut correlations in the Indo-European noun. The general architecture of this theory differs little from one version to another, despite details of terminology and conception associated with individual schools and practitioners (see e.g. MEIER-BRÜGGER 2000: 192): a relatively small set of idealized accent/ablaut models accounts for the vast majority of athematic nominal derivation. Nevertheless, many details of root and suffix alternation do not actually fit the basic parameters of these models, whence traditional assumptions as to secondary generalizations, partly in the histories of particular languages, and partly within PIE itself. Now that a more or less generally agreed-upon set of basic models has been arrived at, it seems worthwhile to examine more closely the sometimes recalcitrant details associated with the presumed generalizations — a type of approach that should perhaps now receive a higher priority

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the age of such formations being clear in all cases: isolated examples include Lat. **fū-ti-* < **ĝʰéu̯-ti-* (presupposed by *fū-tilis* 'leaky', cf. also *fūtis* 'vase' and *effūtīre* 'gossip', vs. pres. *fundō* 'pour'), Lat. *vecti-* < **u̯eĝʰ-ti*˚ in *vectīgal* 'revenue' (see DUNKEL 2000: 95 on the formation of the compound), RV *váśti-* (hapax, V.79.5c; probably with *vaś-* 'desire', thus **u̯eḱ-ti-*, see *EWAia* II.527 and BENEDETTI 1999: 14n34), and the Germano-Slavic **u̯ék-ti-* of Go. *waihts*, OCS *veštĭ* 'thing' (IEW 1136). For the structure of **u̯eĝʰ-ti*˚, **u̯éḱ-ti-* and **u̯ék-ti-*, cf. **u̯és-ti-* (**§3.2.**) and the discussion of samprasāraṇa ablaut above. (For **u̯eĝʰ-ti*˚, note further SCHINDLER 1994: 398, correlating Ved. *vā́has-*, Av. *vašta-* and similar forms with an acrostatic middle **u̯eĝʰ-to*, cf. **§3.2.** and fn. 44 above.) Cf. also Myc. *E-ne-ke-se-u /Enekseus/*, which points directly to a *τερψίμβροτος* form **Enek-si*˚ < **h₁neḱ-ti*˚, see GARCÍA RAMÓN 1999c: 69 and (on the hypocoristic formation in general) MORPURGO DAVIES 1999. (The apparent **mét-ti-* of Lat. *messis* 'harvest' could have been reshaped after *metō* 'mow'.)

[47] Thus here also perhaps **τᾱτό-* (if this is indeed the basis of *τητάομαι*, cf. n. 14 above)/OIr. *táid*, OCS *tatĭ* (**§3.3.**).

several other possible cases of this sort.[53] Whether this is in fact the best way of accounting for forms like *g^hós-ti- (and *g^hós-ti˙, cf. *$déh_3$-ti˙ etc. above) and similar forms remains a question for the future.[54]

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[53] See recently STÜBER 1997 on two possible *n*-stem examples, and RIEKEN 1999: 190 (cf. n. 29 above) on Hitt. *taiš-* < (acrostatic *s*-stem) *d^hoh_1-(e)s-. Somewhat differently on *mōns* (vis-à-vis Av. *maiti-* 'summit'): TREMBLAY 1999: 132.

[54] This paper reflects an expansion of what began as a sub-section (on Myc. *E-ti*˙ and *O-ti*˙, Hom. 'Ορτι˙) of a study of "Rix's Law" in Greek, originally presented at the 19th East Coast Indo-European Conference (University of Georgia, June 2000). (A preliminary version of that paper is in preparation as VINE 2003.) For helpful comments and suggestions, I am deeply grateful to the participants of the conference (for the *ti*-stem material: especially Craig Melchert and Alan Nussbaum), as well as to the participants of the Copenhagen meeting on Indo-European word formation.

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Word formation in Euphratic

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The invention of writing in Southern Mesopotamia at the close of the 4th millennium B.C. provided the state bureaucracy of Uruk with a flexible tool for recording administrative transactions and complex details of economic organization. It also provided a means for setting down language in graphic form for the first time, no matter how rudimentary this tool may have been at the outset. The early beginnings of phoneticism, which appears already in the first stage of Mesopotamian writing, the Uruk IV phase (3200-3100 B.C. in conventional dates), mark also the point from which linguistic and philological research becomes viable. By the middle of the 3rd millennium written language had evolved into a system fully capable of rendering spoken language adequately, thus permitting the development of the first literatures. It is in the wealth of written documents from this region that much data can be gleaned for the study of language contact and language history.

The earliest period of writing is already associated with the first literary tradition: the drawing-up of lexical lists, a tradition that was continued and elaborated on down to the fall of Babylon in the mid-1st millennium B.C. In their mature form, following the period of archaic writing, these lists frequently provide bilingual documentation of important terms in the two dominant languages of the early historical period, Sumerian and Akkadian. While many such terms are independently attested in Sumerian and Akkadian literature, no few are preserved as hapax legomena in the lists alone. With the help of comparative Semitic linguistics it has been possible to refine our understanding of Akkadian, an East Semitic language, and through it, of Sumerian, for which no historical relative has been found (or generally acknowledged) to date.

Akkadian was heavily influenced by Sumerian in the 3rd millennium. Many loanwords, both ritual and everyday terms, passed into Akkadian and found their way into the literature. The reverse is also true. As the prestige of Akkadian rose with the cultural and political power of Akkadian-speaking states, Sumerian borrowed a wide range of terms from it, adapting them to its phonological system. It is through the comparison of these adaptive processes in each

direction that it has been possible to develop a steadily more sophisticated picture of the phonology of both languages. As an inevitable outcome of this improved understanding, scholars have been able to draw attention to a number of terms that do not appear to fit into the existing framework easily, that is, that have characteristics that set them apart from the vast majority of lexemes in each language. Often, it has been conjectured that the language or languages concerned may relate to the period of earliest settlement in Southern Mesopotamia, lexical evidence of which passed into Sumerian and Akkadian as these speech communities established themselves in the land in the early 3rd millennium.

Terms of unknown origin in Akkadian

In his treatise on *Sumerian Loanwords in Old-Babylonian Akkadian*, LIEBERMAN (1977: 16 n. 38) has listed a number of terms that, in his judgement, "simply do not look like native Akkadian." Among them are (with Akk. noun suffix *-um* ~ *-u*):

1. *elammakkum*
   elimakkum
   elumakkum '(a precious wood)'
   elamahhu

   This name of both a tree and its wood has yet to be identified. The *a* ~ *i* ~ *u* fluctuation in the quality of the second vowel suggests the donor language had a schwa-like mid-central vowel or syllabic resonant that was lacking in Akkadian. Similarly, the alternation *k* ~ *h* in stem-final position suggests a voiceless phone that was perceived as lying somewhere between Akkadian *k* and *h*.

2. *kusarikkum*
   kusarakku
   kušarihhu 'bison'
   husarikku

   This term for 'bison' in a mythological context exhibits the same consonantal alternation seen in the preceding instance. In addition, the fluctuation between *s* and *š* suggests the donor language had a sibilant not identical to any in Akkadian, but perceived as closer to *s* than to *š*.

3.	*penzurrum*			*upinzar*
	penzurum		cf.	*upizar*
	pinzurrum	'spinner'		*upinzir* 'Spinnerraupe' (AHw 1423)
	pinzurum			*ubinzir*

The semantics of Akkadian *penzurum*, like those of Sumerian **penzer** (**pe-en-ze$_2$-er**), are not as clear as Lieberman would have it. The term occurs in a Sumerian proverb with reference to someone responsible for multicoloured inlay work, **ugun** (ALSTER 1997: I 14.43, II 431-432). Such ornamentation was added to textiles, leather, wood and metal. Here, too, vocalic alternation and the opacity of the morphology of these two related sets would tend to argue for a foreign origin. But from which language (or languages), if not Sumerian?

Technical loans in Sumerian

CIVIL (1996) has made a similar case with regard to Sumerian. In this important paper he reasserted the standard view in Assyriology of Sumerian as a language with primarily monosyllabic lexemes, contrasting these with nonsegmentable polysyllabic terms, which he regards as loans. Civil was primarily concerned with identifying such terms as loans from Semitic languages, but his demonstration also holds good for other polysyllabic lexemes for which no Semitic etymology can be proposed. Among the characteristics regarded by Civil as indicators of loanwords in Sumerian are the lexeme shapes

a) of "foreign" (i.e. non-Semitic) origin:
- **CV$_1$CV$_2$C** (with disparate vowels)
- **CaCin** (in the areas of cereal agriculture and brewing)
- **CaCur** (in tree names)
- **CaCar** (in the names of professions)

and b) of Semitic origin:
- **CuCuC** and, to a far lesser extent, **CaCaC**, **CiCiC** (oldest layer)
- **CVCVCa** (intermediate layer)
- **CVCVCum** (latest layer).

With regard to the "foreign" category, Civil stands fully in the tradition of SALONEN (1968), from whom he has freely drawn. To the above he adds the terms **a-gar$_3$** ('arable tract') and **temen** ('foundation; field perimeter') as examples of "Eastern Mediterranean" loans, and the names of equids, all of which he labels foreign (origin unknown). A characteristic of loanwords in Sumerian that is not discussed by Civil is the rare phenomenon of medial consonant clusters, especially those that fluctuate in their appearance in a given term, sometimes being written as such, sometimes broken up by the insertion of a (variable) vowel.

Euphratic

Many such terms suggest an Indo-European origin.[1] As discussed in a series of recent papers (WHITTAKER 1997, 1998, 2001),[2] the donor language is likely to have been introduced into Southern Mesopotamia by Late Uruk times (2nd half of the 4th millennium) by a pre-equestrian society practicing agriculture and pastoralism.[3] This society, which I have dubbed the Euphrateans, left traces in many of the sign values of the proto-cuneiform writing system as well as in

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[1] For Lieberman's foreign terms (see nos. 1-3 above) the following tentative comparisons can be made:

1. *h$_1$el-m-ah$_2$ < IE *h$_1$el-m-, *h$_1$l̥-m- 'elm';
2. *h$_2$u̯s-r-ah$_2$ ~ *h$_2$u̯s-r-ih$_2$ 'dawn (i.e. red) cow' (cf. Old Indic *usrā́* 'cow', *usrás* 'bull');
3. *pen-sor- 'spinner' (< *(s)pen- 'spin' + *-sor-, *-sr- 'female').

[2] With regard to a brief 1993 paper by Douglas Frayne that was inspired by an earlier version of my work (WHITTAKER 1978), but that was published without acknowledgement and with inaccurate data, see WHITTAKER (2001: 41 n. 8).

[3] It should be noted that two of the three leading theories on the location of the Indo-European 'homeland', those of GAMKRELIDZE and IVANOV (1995 [1984]) and of RENFREW (1987), see Indo-Europeans as originating in a zone flanking the northern and western reaches of Northern Mesopotamia, namely Transcaucasia and Eastern Anatolia respectively. Indeed, Gamkrelidze and Ivanov suggest a connection with the Halaf culture of Northern Mesopotamia. The dominant view, however, is still that propagated by Marija GIMBUTAS (e.g. 1970), associating Indo-Europeans with what she dubbed the Kurgan culture of the South Russian steppes. None of these theories is specifically endorsed here. Each provides a plausible region from which an early group of Indo-European speakers could have migrated towards Southern Mesopotamia.

the lexica of both Sumerian and Akkadian. Loans from the Euphratic language[4] permeate broad areas of culture and society. They have undergone a process of assimilation to Sumerian and Akkadian, which in the former case frequently involved the assimilation of unstressed to stressed vowels (Sumerian vowel harmony). Surviving variants in the lexical lists and other texts often reveal an earlier form of the words in question. Most early syllabic renditions of Sumerian words are Neo-Sumerian (NS), dating from the end of the 3[rd] millennium and, in Old Babylonian copies, from the 1[st] quarter of the 2[nd] millennium B.C., the terminal phase of Sumerian as a spoken language. The discovery of late Old Sumerian lexical lists in the ancient Syrian city of Ebla, dating to ca. 2350 B.C., has improved our understanding of Sumerian language history by yielding up many Old Sumerian (OS) spellings of familiar terminology as well as providing an extensive amount of new lexical data.

Animal husbandry

In the area of animal husbandry and domestication the following terms stand out. Unmarked forms from here on are to be understood as Neo-Sumerian.[5] Segmented Sumerian forms are syllabic spellings, not morpheme sequences.

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[4] Not to be confused with the so-called Proto-Euphratic language proposed by Benno LANDSBERGER (1944) as a substrate underlying Sumerian. The majority of the terms put forward as evidence by Landsberger – in what was in effect a general essay lacking any attempt at documentation and careful argumentation – have a recognizable Sumerian or Semitic morphology (for a recent, but excessively negative, overview see RUBIO 1999).

[5] Representative syllabic spellings and accessible sources are given at the end of each entry, unless the term concerned is only attested in syllabic form and has already been cited as such. Here the abbreviation NS includes for convenience the evidence of post-Sumerian lexical lists, which are generally taken to reflect the final stage of the language. Postulated phonemes and phonemic sequences are given between slashes, while allophones of a single phoneme are set within brackets. Allophones reflected in syllabic spellings will be included in the phonemic sequences but duly identified as such.

4. OS (Ebla) **u_3-wi** > NS **u_8**; **us_5** 'ewe' : cf. IE *$*h_2ou$-i-s* 'sheep'[6]

The IE nominative *-s* is preserved in the NS variant **us_5** (*/ôs/*),[7] protected (while non-final) in the collective term **usduha** 'flock of sheep (with and without goats)'. Otherwise, in final position *-s*, where retained, develops regularly into a Sumerian flap [*ɾ*] (written **d/r**). BLACK (1990: 108-109, 117) has already made a case for the status of [*d*] and [*ɾ*] as positionally, dialectally or historically restricted allophones of a single phoneme */d/*. The NS variants **u_2-ia** ~ **u_2-a** seem – if representing */ói̯o/* – to reflect the IE genitive, *$*h_2ou$-i̯-os*, the phoneme */o/* being represented necessarily by **u**/**a** graphemes, since there was no */o/* in the Akkadian syllabary used for the phonetic rendition of Sumerian terms. Arguments for a Sumerian */o/* vowel have been made or endorsed by a number of scholars (e.g. LIEBERMAN 1977, 1979; BOISSON 1989; WHITTAKER 1998, 2002) on graphemic, typological, and statistical grounds. Syllabic spellings: OS **u_3-wi** (MEE 3 251; CIVIL 1982: 13); NS **us_2** (CAD 9 42), **us-du-ha-a** (AHw 1091; CAD 16 128), **u_2**, **u_2-ia** ~ **u_2-a** (CAD 7 128, 9 42).

5. **gud/r**, **gu_4** 'ox, bull' : cf. IE *$*g^w\bar{o}u$-s* 'head of cattle'

The Sumerian term is attested both in the standard dialect, Emegir (EG), and in Emesal (ES), a form of speech generally associated with goddesses and women, with a secure initial g[8] – by con-

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[6] The Ebla form is strictly to be read **u_3-wV**, since the vowel of the second syllabogram is variable. CIVIL (1982: 13) reads the OS term for 'black ewe', recorded at Ebla in MEE 3 in text 62r. II 11, as **u_3-wi-ki-ki**, where **ki-ki** represents the forerunner of NS **g̃ig(i)$_2$** 'black'. NS **u_2-ia**, with its retention of **i** as a palatal glide after regular loss of intervocalic **w**, argues for OS **u_3-wi**.

[7] The contraction of two like vowels results in a tense (and, as a co-feature of tenseness, long) vowel: */a, i, u/* (see WHITTAKER 1998 for a tentative reconstruction of the Sumerian phonological system). Such contractions are indicated by placing a circumflex over the vowel in question, a convention adopted from Akkadian studies. Thus, as allophonic representations, [*â*, *ɔ̂*] = */a/*, [*î*, *ê*] = */i/*, [*û*, *ô*] = */u/*. There is no unambiguous evidence for phonemic length in Sumerian. The confusion in Sumerology regarding the interpretation of Sumerian loans in Akkadian with long vowels is best illustrated by EDZARD (1995: 2108-2109), who in a summary article on Sumerian wavers indecisively between vowel quantity and vowel quality.

[8] There is unanimity among Sumerologists on this point, since the textual evidence is quite clear.

deed, an intermediary OS form with initial *$\acute{s}e$* is suggested not only by the Akkadian loan attested as *še-hu-u*$_2$ 'pig' at Emar and Ugarit (SJÖBERG 1998: 274), equivalent to Old Babylonian *šahû* from Sum. **šah**, but also by the Sumerian variant **ze$_2$-eh** for the same term. NS **ša$_2$-ah** ~ **sa-ah**, **ze$_2$-eh** (SLOBA 578; AHw 1133; CAD 17/I 102).

7. **ubur** 'udder, teat; breast' : cf. IE *uh_1d^h-r̥* 'udder'

A dental stop or nasal becomes a labial stop before final *r̥*, perhaps in Euphratic itself. A parallel instance is presented by **tibir** 'hand'[11] (cf. IE *d^hen-r̥* 'palm of the hand'). As in Old Indic, the Sumerian term refers also to the udders of heaven. NS **u-bur** (AHw 1369).

8. **saman** ~ **samun** 'lead-rope' : cf. IE **s(i̯)uh-mn̥* 'strap'

The NS variants represent */səmə́n/*, vowel-harmonized from */*sumə́n/*, the pre-form borrowed into Akkadian as *šumma(n)nu* 'rope, tethering rope'. NS **sa-ma-an** ~ **sa-mu-un** (SLOBA 584; CAD 17/III 279).

In agriculture and brewing, together the second semantic category singled out by CIVIL (1996) as notable for its inclusion of foreign terminology (but without citing examples or proposing a source), the following comparisons can be put forward:

Agriculture

9. **a-gar$_3$** ~ **ugur$_2$** 'arable tract' : cf. IE *$h_2a\acute{g}$-ro-* 'field, pasture'

Like no. 5 above, this pair has been incautiously assumed on occasion to have a historical relationship involving derivation of the IE term from the Sumerian, despite the segmentability of the former and the monomorphemic status of the latter. The Sumerian (EG) term **a-gar$_3$** is one of the two alleged Eastern Mediterranean loans cited by Civil. The correspondence EG **a-gar$_3$** : ES **a-da-ar** suggests

[11] A specialized term. The usual word for 'hand' is **šu**.

The graphic geminate **l** may represent either /_ll_/, resulting from the assimilation of the glide to the liquid, or /_l'_/, a palatalized liquid[18] reflecting IE _*li̯_. The consensus of Assyriological opinion is that Sumerian had no true geminates (but see no. 20). There is no systematic graphemic distinction between **CeC** and **CiC** syllable signs. NS **mil-la** > **mi-il** ~ **me-el** (MSL 14 41; CAD 8 500).

14. **ar$_3$-ar$_3$** ~ **a-ra** 'miller': cf. IE _*h$_2$(a)lh$_1$-tr-_ 'miller' < _*h$_2$alh$_1$-_ 'grind, grind down'

The Sumerian term **ar$_3$-ar$_3$**, for /_arə́r_/ or /_ərə́r_/, is related to **ar(a)$_3$** /_ár(a)_/ 'grind' (cf. IE _*h$_2$alh$_1$-_ 'grind') and **ara$_3$** ~ **u$_2$-ru** /_óro_/ 'grinding slab, hand mill' (prob. < _*əróm_; cf. IE _*h$_2$(a)lh$_1$-tro-m_ 'mill').[19] The reduction of the medial cluster _tr_ (like _rt_; _r_ + velar stop) to Sumerian **r** is regular. There is also a strong tendency for _lh$_1$_ to merge as **r** in Sumerian (as e.g. in **erin** 'cedar' < IE _*h$_1$elh$_1$-en-_ 'cedar, juniper' (no. 37); **gugarid**[20] '(an unglossed value of the BOVINE sign; cf. no. 5)' < _*g^{w}ou̯-k$^{(w)}$olh$_1$-ii̯o-s_ 'cowherd'; **engar** 'farmer, ploughman' < _*en-k^{w}olh$_1$-_[21]; **gigir**[22] 'chariot' < _*k^{w}e-k^{w}lh$_1$-_ 'wheel'). NS **ar$_3$-ar$_3$** ~ **ar-ar** ~ **a-ra** (SLOBA 59; CAD 1/II 233); **ar(a)$_3$** (= **HAR/HUR**) ~ **a-ra** (CAD 15 107); **ara$_3$** ~ **a-ra-a** ~ **u$_2$-ru** > **ur** ~ **u$_2$-ur** (SLOBA 691; CAD 4 323).

Contrast the preservation of IE _lh$_1$_ in Akkadian _alahhinu_ ~ _lahhinu_ ~ _alhenu_ 'miller' (a loanword "u[nbekannter] H[erkunft]"

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[18] Some scholars (e.g. FALKENSTEIN 1964: 24 fn. c) have argued for the existence of two **l** phonemes in Sumerian on the basis of the tendency for certain instances of **l** + suffix to be written phonetically with the grapheme **la**, others with **la$_2$**.

[19] This Euphratic term appears to have found its way into Semitic via Sumerian, e.g. Akkadian _erûm_ 'hand mill' (AHw 247). See OLSEN 1988 for a reconstruction of the morphophonemic range of the pre-IE instrument noun suffix _*-tlom_.

[20] Spelt **gu-ga-ri-id** (MSL 14 360). Written with the DIVINE determinative, this may have named a herdsman deity.

[21] Spelt **en-ga-ar** (MSL 14 52; CAD 7 49). Compounding with an adprep is a Late IE feature occasionally attested in Euphratic. Here, as elsewhere, Euphratic betrays a close lexical relationship to the historically western dialect area of IE. In this instance, an exact match is found in Lat. _incola_ 'inhabitant' (cf. _colō_ 'cultivate, till; inhabit'). Note that a variant spelling of the Sum. term for 'farmer' is EARTH-**ku-lu$_2$** (CAD 7 49; SLOBA 360).

[22] Spelt **gi-gi-ir** ~ **gi-gir** (MSL 14 33, 178; CAD 11/I 353).

in the opinion of AHw 31), the title of an official who "had the responsibility of collecting tax barley from the villages, grinding, and distributing it. The *alahhinu* is usually mentioned beside the brewers" (CAD 1/I 296). The title is an independent loan from IE **h_2alh_1-* ~ **h_2leh_1-* (LIV 247) + indeterminate suffix.

15. **k/garadin** 'stack of sheaves' : cf. IE **kr̥h_2t-i-m* (acc.) 'wickerwork'

Parallel in form to verbal nouns in *-ti-* (see nos. 42-45 below), which are borrowed into Sumerian in the accusative case and, as a rule, retain traces of the accusative inflectional suffix *-m*. This final later undergoes assimilation to the preceding dental stop, becoming **n**. Variants are attested both with final **m** and with **n**. For further examples, see **-ti-m* in the section on Sumerian polysyllabic terms with final **in**, below). The NS form probably reflects */kərə́tin/*. The Sumerian schwa is the third phoneme in the Sumerian triad of lax vowels: */e, o, ə/*, contrasting with the tense vowels */i, u, a/* (for a discussion of Sumerian phonology see WHITTAKER 1998: 117-122). The schwa, being absent from the Akkadian-based syllabary, since it was not part of the Akkadian phonological system, can only be represented by **a**, **i**, **e** and **u** graphemes. A word containing a schwa becomes recognizable independently of etymological analysis when it has variant spellings with **a** and **i** or with **u** and **i**. STEINKELLER (1995a: 542) has argued for a Sumerian */ü/* phoneme, equivalent as a central vowel to my */ə/* (WHITTAKER 1998: 129), on the basis of **uru** ~ **i-ri** 'city' (MSL 14 53). NS **ka-ra-din** ~ **ga-ra-din** ~ **ga-ra-di-in** ~ **ga-ra-ad-di-in** ~ **ga-ra-di** (MSL 14 50; CAD 8 572).

Brewing

In an insightful study of Sumerian beer-brewing terminology, CIVIL (1964: 85) wrote that "practically all the technical terms of the Mesopotamian brewer" are "foreign", by which he meant non-Akkadian. This terminology can also be profitably compared with Indo-European:

16. **kaš** 'barley beer' : cf. IE **ku̯ath$_2$-so-* 'fermented substance' (Russian *kvas*)

ly to Sumerian **r** (see, e.g., nos. 14 and 28). OS **la-ha-da-m** (as above) > NS **la-ah-ta-an** > **la-ah-ta** (SLOBA 430; CAD 9 44).

The underlying verb occurs as **lah₃** ~ **luh** /*loh*/ 'wash, cleanse' (cf. IE **leuh₃-* 'wash'), borrowed probably in association with its logogram. NS **la-ah** ~ **lu-uh** ~ **lu-uh₂** (SLOBA 446; MSL 14 41).

19. **pihu** 'beer jug; (vessel for an ingredient in beer production)' : cf. IE **pih₃-uo-* 'drink' (n.)

The derivational suffix of the Euphratic term cannot be reconstructed with any certainty. IE **-u* and **-uo-* would both result in Sumerian **u** (or **a**, for /*o*/) when final, due to laxing of the final vowel. There are very few Sumerian terms with initial **p**, many of them transparent loans from Akkadian. IE **pih₃-uo-* is reflected in Old Church Slavonic *pivo* 'drink, beer'. NS **pi-hu** (AHw 862; SALLABERGER 1996: 105).

20. **mudla** 'drinking vessel; basket' : cf. IE **poh₃-tlo-m* 'drinking vessel'

The Sumerian term does not at first glance appear to be a likely candidate for derivation from Indo-European. The labial stop has been subject to a process of assimilation in Sumerian to the labial nasal in final position, a process for which there is sufficient documentation (see especially WHITTAKER 2001: 34). One clear instance of this process is provided by a set of attested variants:

> **meze** /*mə́zə*/ < **mezem** /*məzə́m*/ < **pisan** ~ **bizem** /*pizə́m*/ 'chest, basket; conduit'[24]

Examples involving loans from Akkadian are:

marhaši ~ **marahši**	< ***marahšim**	<	Akk. *parahšim* '(the land of) Marhaši'[25]

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[24] The origin of this EG term is unknown.

[25] STEINKELLER (1982: 238 n. 1) cites the Old Akkadian geographical name as *parahšūm*, but note also the spelling *ba-ra-ah-si-im* (gen.). His solution to the problem posed by the Sumerian **m** is to reconstruct the initial as a "phoneme" /ᵐ*b*/ or /ᵐ*p*/, which "was heard as /*p*/ by the Akkadians". Steinkeller's

Sumerian. Variants preserved in Sumerian literature and in the lexical lists betray this process of reduction:

IE **seǵʰ-o-s* 'holding' > **šukud/r** > **šu-ku** > **šu-ug** 'subsistence holding' (see no. 11)

21. IE **louǵ-o-m* 'clump of earth' > **la-ga-m**[28] ~ **la-ga-ab** > **la-ag** 'clump (of clay, etc.)'

IE **di̯ork-ah₂* 'roedeer' > **durah** > **da-ra** > **da-ar₂** 'fallow deer' (no. 29)

An interesting case of such preservation and reduction relates to an animal term. The FOX logogram, , which goes back to the earliest stage of writing, that of Uruk IV, has in the 3rd millennium B.C. both the semantic value **ka₅** 'fox' and the phonetic value **lib** ~ **lub**. There is no known motivation for the latter, that is, there is no Sumerian term with the pronunciation **lib** ~ **lub** that has some direct or obvious connection with the semantic domain of FOX. This is only one of many such instances in the Mesopotamian writing system, a phenomenon which suggests strongly that the writing system had been adapted to Sumerian after an earlier period of development in connection with a different language, one in which the ancestors of such orphaned values were words in the semantic domains of the archaic signs. The preservation and adaptation of IE values for the purpose of the Akkadian syllabary, which began to take shape in the Fara period (c. 2600 B.C.), entailed the reduction of these values to monosyllables, in the course of which vital information on the original final syllable could be irretrievably lost. This appears to be what happened in the parallel case of **lik**, the phonetic value of the DOG/WOLF sign, which probably derives from IE **u̯lkʷ-o-s* 'wolf'.[29]

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[28] The term is attested at Emar as **la-ga-me** (for **lagam**; see VELDHUIS 1997). NS **la-ga-ab** (SLOBA 427; CAD 17/II 379) reflects the common fluctuation in syllabic spellings between **m** and **b**, above all in final position, that is suggestive of an [ᵐb] allophone of /m/, not a phoneme as often assumed. There is a lamentable tendency in the Sumerological literature to use the linguistic term *phoneme* uncritically, that is, without proper – or indeed, in some cases, any – prior evaluation of phonetic environment (on this see especially BLACK 1990). NS **la-ag** (CAD 8 401).

[29] Other examples of orphaned values are:
(a) **hu** ~ **u₁₁** BIRD : cf. IE **h₂au̯-i-* 'bird',
(b) **peš** FISH₂ : cf. IE **p(e)isk'-o-* '(fish sp.)',
(c) **gir₃** HORNED MAMMAL : cf. IE **k'er-u̯o-* 'deer/ox' (all documented in

When an Indo-European origin and motivation for **lib** ~ **lub** was first proposed (WHITTAKER 1978; 1997; 1998: 114), namely **u̯l̥p-*eh_1*-s* 'fox', the author was unaware of the existence of an actual Sumerian term that preserved not only the root (**u̯l̥p-*), but also the derivational suffix (**-*eh_1*-* or **-i̯-*) completing the stem, and even the case marker of the nominative singular (**-s*). The term in question names both an agricultural instrument and a weapon (CAVIGNEAUX 1992; CIVIL 1994: 149-150, 152):

22. **lub-bi-du** > **lub-bi** > **lub** */ləb/* '(kind of hoe); (war axe)' : cf. IE **u̯l̥p-*eh_1*-s* 'fox'

Here, too, the Indo-European suffixation was progressively lost. This (in its fullest attested form) trisyllabic term, written **lub/lib-bi-du** ~ **lub/lib-bi-da** ~ **li-bi**$_2$**-du** */ləpíɾo/*, is translated into Akkadian as *šelibtu*, the unattested feminine of *šelibu* 'fox'. In his discussion of the Sumerian term, for which he offers no etymology, Civil adds a word of caution that "the meaning of *šelibtu* as a tool name is not necessarily 'vixen'. The similarity may be accidental; note, however, that tools with names of animals are frequent in the history of technology" (CIVIL 1994: 152 n. 10). An identification of the term with the domain of FOX can be supported now by the following: (a) the use of the FOX logogram to write it, (b) its Akkadian translation, (c) the meaning of the donor term in Indo-European, (d) the regularity of the phonetic correspondence between the IE and

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WHITTAKER 2001: 14-18). That **hu** ~ **u**$_{11}$ originally meant 'bird' can be seen by its occurrence as the embed in the Akkadian term *huhāru* 'bird trap' (CAD 6 224), which must be a loan via Sumerian from Euphratic. Sumerian ***huhar**, the intermediate source of *huhāru*, was lost and replaced by **har-mušen-na** (**har** 'ring', **mušen** 'bird'). Note that the required order of the latter's components in Sumerian contrasts with Indo-European compounding order. The ultimate Euphratic source was probably ***h_2*au̯i-*h_2*ar-o-*, lit. 'bird fittings (snare)', from IE ***h_2*au̯-i-* 'bird' and ***h_2*ar-* 'fit together' (cf. Sum. **har** 'ring; fitting (of plough, etc.)'). Sumerian **hu** ~ **u**$_{11}$ must come from an earlier ***hawi** in the same manner as NS **u**$_8$ 'ewe' comes from OS **u**$_3$**-wi** (from IE ***h_2*ou̯-i-* 'sheep'; see no. 4 above). The reflexes of IE ***h_2 and ***h_3 have no consistent representation in the Akkadian syllabary used for spelling Sumerian words. Thus, IE loans with these laryngeals are attested in Sumerian sometimes with, sometimes without **h** graphemes, as in the case of **hu**. Examples for ***h_2 and ***h_3 in initial position are:

***h_2: h_2*au̯-i-* 'bird' > **hu** ~ **u**$_{11}$ '(phonetic value); bird (lexical lists only)' (CAD 7 210)

***h_3: h_3*or-en-* 'eagle' > **hu-ri**$_2$**-in** ~ **u**$_2$/**u**$_5$**-ri-in** 'eagle' (AHw 1430)

Sumerian terms, and (e) the known use of animal names for tools. Furthermore, the FOX sign's syllabic values **lub** ~ **lib** and **pih** ~ **pah** ~ **puh** (also unmotivated) both point to IE **u̯l̥p-eh₁-* 'fox' as its original logographic value.

The choice of a primary grapheme with value **lub** ~ **lib** */ləb/* for this word suggests the expected */lə/* (earlier */*ələ́/*; see the section on **-ti-* below) for IE **u̯l̥*, **b** represents intervocalic */p/*,[30] the **i** vowel of the medial syllable can reflect IE **-eh₁-* or **-i-*, while the final alternation **da** ~ **du** */ɾo/* (for the usual *[ɾ]*; see no. 4) reflects IE **-s*, but has probably been influenced by the Akkadian feminine suffix *-tu* (> Sum. **da**) because of the partial (and fortuitous) resemblance of the second syllable of the Akkadian stem to the Sumerian.[31]

A number of Sumerian loans preserve IE inflectional suffixes. In such instances the case markers pertain either to the nominative or to the accusative. The clearest instance of borrowings in the nominative are terms ending in **d/r** *[ɾ]*, from IE **-s*. Accusative forms are seen, for example, in polysyllabic words ending in **tim** ~ **tin**, from IE **-ti-m*, with a tendency towards regressive assimilation of the nasal labial to the dental stop. This situation is not unusual in loans from inflectional languages: Sumerian has simply borrowed words in their most salient cases. As a general trend, the nominative is found, if at all, in the names of deities and genii, numinous forces, animals, whereas the accusative is more frequent in the names of objects, terms of relationship through marriage, and verbal nouns:

23. **lama(d/r)**, Akk. *lamassu* 'protective spirit; good looks' : cf. **lam-i̯o-s* '(an avaricious spirit)'

This oft female genius was responsible for "representing and protecting the good fortune, spiritual health and physical appearance

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[30] The medial labial of the Sumerian is ambiguous as to voicing: in intervocalic position voiceless stops are unaspirated, represented by **b** ~ **p** (for */p/*), etc., in syllabic spellings (WHITTAKER 1998: 122).

[31] A similar instance of contamination is provided by native English *island*, the *s* of which has intruded on the false assumption of a relationship to *isle*, which is of French origin. The term **lub-bi-da** cannot be seriously entertained as a Semitic loan in Sumerian – and indeed has never been proposed to be such – because it lacks all traces of the Akkadian initial syllable *še*, which, judging from all that is known about the phonological assimilation of Akkadian loans in Sumerian, is unlikely to have been eroded.

of human beings, temples, cities and countries" and in an abstract sense stood for "good looks" (CAD 9 60-61). The Sumerian name, spelled **la-am-ma**, has a final flap that only appears in writing when a vowel-initial suffix follows. The Akkadian form of the name, borrowed from Old Sumerian, preserves the original sibilant. For the semantic development, cf. Greek λαμυρός 'gluttonous, greedy', but also 'charming; bright'. From IE **lem-* ~ **lam-* comes also Latin *lemurēs* 'nocturnal spirits, souls of the departed'. Quite distinct from the positive nature[32] of the *lamassu* was the formally related Akkadian *lamaštu* ~ *lamassu* (CAD 9 66), a female demon that snatched children (BLACK and GREEN 1997: 115-116); also the name of a disease. Cf. the Greek λάμια, likewise a female demon that snatched children (GRAVES 1960: I 205-206). IE **lam-i̯o-s* ~ **lam-i-*h_2 would mean literally 'the gluttonous one' (Greek λαιμός 'gluttonous, greedy'). NS **lamad-d(i)** ~ **lamad-r(a)** > **la-am-ma** (SLOBA 434; CAD 9 61).

24. **anzu(d)** ~ **zu(d)** 'storm numen' : cf. IE ***h_2*(a)ns-u-s* 'numen, spirit'

The **anzud** (borrowed into Akkadian as *anzû* ~ *zû*) was the numinous force in the thunderstorm and was depicted as a lion-headed eagle (**hurin**; see fn. 28 and no. 34). NS **an-zu-d** /*ənzúɾ*/ > **an-zu** ~ **an-za**$_3$ ~ **a-an-su** ~ **zu** /*ənzó*/ (ALSTER 1991: 1-5; MSL 452; CAD 1/II 153-155).

To the storm complex belongs also **Iškur**, the god of storms (cf. IE **sk'uh*$_1$*-ro-* 'north wind; shower, storm').[33] NS **iš-kur** (MSL 14 57).

25. **gud/r** ~ **gu**$_4$ 'ox, bull' : cf. IE ******g*^{w}*ōu̯ -s* 'head of cattle' (see no. 5)

[32] A solitary, but late, reference to a **lama-hul** 'evil genius' is known from a text of the Isin period (SPYCKET 1960: 79).

[33] A parallel, but rare, instance of the preservation of the cluster *sk* in Sumerian is to be seen in **iškila** 'conch shell,' borrowed into Old Babylonian Akkadian as *išqillatu* (cf. IE **skel-*). These must be regarded as late, unassimilated loans. NS **iš-ki-la** ~ **iš-ki-li** ~ **e-zi-la** (SLOBA 364; CAD 7 260).

Assimilated loans exhibit Sumerian **š** as reflex of IE *sk/sk'*, as in **šurim** 'excrement (of sheep and gazelles)' (< IE **sk'or-i-m* (acc.) 'excrement'). NS **šu-ri-im** (AHw 865).

after the distinctive handle of this vessel. A similar term is **am(m)am** (CAD 1/II 67-68), which names another vessel used for beer (cf. **$h_2$amh-ah_2-m* (acc.), from IE **$h_2$amh_3-* 'grip' or **$h_2$amh-* 'pour'; related to Armenian *aman* 'vessel'; see LIV 237). For the vessel known as the **emerah**, from **h_2(a)mh-tlah_2-* ~ *-trah_2-*, see no. 33. NS **am-ma-am** ~ **am-am** (SALLABERGER 1996: 98; CAD 1/II 67).

26. **mutin** 'man; bridegroom' : cf. IE **pot-i-m* (acc.) 'lord; husband'

This Emesal kinship term provides another example of the nasalization of an initial labial stop under the influence of a final labial nasal. After this a further assimilatory process took place, this time of the final nasal itself to the preceding dental, as in the example below. Both of these processes took place within the period of historical Sumerian, since syllabic spellings attest to them. NS (ES) **mu-ti-in** ~ **mu-tin/din** (SCHRETTER 1990: 236).

Parallel to this term is ES **mutina** ~ **mutin** 'young woman' (cf. IE **pot-n-i̯-ah_2-m* (acc.) 'lady; wife'), translated 'Herrin' by FALKENSTEIN (1939: 169). NS (ES) **mu-ti-in** ~ **mu-tin** ~ **mu-ti-na** (SCHRETTER 1990: 236-237).

From the same source comes ES **mudna** / **mutna** 'spouse'. It is significant that the entire set of terms classifying a man's relatives by marriage appears to be of Indo-European origin (see WHITTAKER 1998). NS (ES) **mu-ud/ut-na** ~ **mu-ud-da-na** (SCHRETTER 1990: 220).

In the sense of 'lord' IE **pot-i-s* is preserved in the writing convention **PA-TE-si** for Sumerian **ensi$_2$** 'city governor' (HALLO 1957: 34-35), where **PA-TE** is read **en$_5$** and equated with **en** 'lord'.[37] In the archaic texts of Jemdet Nasr the sequence HOUSE-LORD-**ti**, for

[37] As with other IE stems ending in the sequence *ti-*, most of which are verbal nouns, the stem is reduced through laxing of Sumerian **ti** in final position to **te**, followed by loss of **te** entirely in NS. Thus, we have several terms with variants like **ašte** ~ **aš-te** > **aš$_2$** ~ **a$_2$-aš$_2$** 'needs; supplies; desirable item' (CAD 6 204; < IE **$h_2$ai̯s-ti-* < **$h_2$ai̯s-* 'wish for, desire, yearn for' (LIV 231); see WHITTAKER 2001: 17 for further examples). Thus, the archaic title **pa-te** reduces to **pa**, which accounts for the frequency with which PA turns up as a graphic element in the scribal conventions for titles. It is generally held in Assyriology to stand for Sumerian **pa** 'foliage; branch' in a symbolic sense, but this has all the hallmarks of a folk-etymology.

the lord of the temple household (ENGLUND 1998: 75), is probably a loan from IE **dems-pot-i-* 'lord of the household'. A related title in Old Sumerian royal texts is **GAR(A)-PA-TE-si** (HALLO 1957: 35-39), also equivalent to **ensi$_2$**, and perhaps from IE **ǵʰr̥dʰó-pot-i-s* 'lord of the settlement', which survives in Old Indic *gr̥hápatis* 'lord of the household'.

27. **-PI** '(comitative postposition for 3rd pers. pl.)' : cf. IE **-bʰi* '(instrumental pl. suffix)'

In Old Sumerian economic texts **-PI** may occur in the pronominal chain of the verb in contexts where the comitative/instrumental postposition **-da** would otherwise be expected (THOMSEN 1984: 225).[38] This only happens in conjunction with the 3rd person plural. To date Sumerologists have not succeeded in finding a convincing explanation for this curious phenomenon, one that is all the more puzzling given the fact that postpositions like **-da** are immutable, lacking separate singular and plural forms. The solution seems to lie in perceiving the occasional use of **-PI** as a holdover from Euphratic scribal conventions. Just as Akkadian and Hittite texts employ Sumerian **-MEŠ** as a mere scribal convention (a Sumerogram) for the indication of a noun plural, it is probable that **-PI**, used originally in as yet unidentified Euphratic texts for the IE comitative/instrumental plural suffix **-bʰi*, survived as an Old Sumerian device, a Euphratogram as it were, for the rendition of a comitative postposition attached to a 3rd person plural pronoun (see also WHITTAKER 2001: 24-25).

A few other Euphratic grammatical elements have survived into historical times in Sumerian and Akkadian, and not merely as scribal conventions. Of particular interest are the Akkadian prepositions of Presargonic (ca. 2600-2350 B.C.) and Sargonic (ca. 2350-2150 B.C.) date:

in (Presarg., Sarg.) 'in, to; from' (cf. IE **en* 'in')
ana (Sarg.) 'to, for, at, according to' (cf. IE **ana ~ an* 'on, up (onto); according to')

In Presargonic texts the preposition *in* is readily identifiable because it is written phonetically with the syllable sign **in** (KREBERNIK 1998: 270), rather than with a logogram. Later, in Ur III times

[38] As THOMSEN (1984: 225 n. 97) has shown, the grapheme **PI** also alternates with **DA** in an as yet unexplained title from Nippur.

prior loss of *h_1 in this environment in Euphratic. Note, however, that the medial sequence *h_3tr is resolved as **ht** in **lahtan** (see no. 18). OS **ne-ra-[ah]** (Ebla)[39] > NS (EG) **ni-ra-ah** ~ (ES) **še-ra-ah** (McEwan 1983: 215 n. 6; Schretter 1990: 255; CAD 11/II 259).

29. **durah** ~ **dara(h)$_3$** 'fallow deer' : cf. IE **di̯ork-ah$_2$-* 'roe-deer'

In most of the Sumerological literature, **durah** is translated 'ibex'. Contradicting this is the form of the logogram for **durah** in Uruk IV, , which clearly shows antlers rather than the single-tined horns of an ibex or other wild goat. Steinkeller (1989: 5 n. 5), in arguing for the Persian wild goat, or bezoar, let himself be misled by the more streamlined form of the sign in and after Uruk III (for a critique and references see Whittaker 2001: 19-20). The Mesopotamian fallow deer is the best available candidate for the **durah** in the Mesopotamian area – this is reflected also in the translation offered by Civil (1983a: 55/60 at line 107, though without commentary). IE **di̯ork-ah$_2$-* ~ **i̯ork-ah$_2$-*, attested in Greek, Celtic and metathesized in Germanic, consistently denotes the roe. The correspondence of intervocalic /r/ plus velar stop to Sumerian **r** is regular. NS **du-ra-ah** > **da-ra-ah** ~ **ta-ra-ah** > **da-ra** > **da-ar$_2$** (SLOBA 153; AHw 1372).

30. **dara(h)$_4$** 'dark-coloured, dark red' : cf. IE **dʰorg-ah$_2$-* 'dark-coloured, red'

As Steinkeller (1989: 3) has demonstrated, **dara(h)$_4$** is phonetically identical to the fallow-deer term. In the archaic texts of Uruk **dara(h)$_4$** is an important colour term (see Green and Nissen 1987: 185). An OS by-form is known from Ebla, spelled syllabically **de$_3$-ri-hum** (with the Semitic suffix *-um* added, as is normal in the case of Ebla sign names), which suggests an underlying IE **dʰerg-ih$_2$*. OS **de$_3$-ri-h***(um)* > NS **da-ra** > **dar$_4$** (Steinkeller 1989: 3; CAD 3 74).

31. **larah** '(part of yoke harnessing of plough)' : cf. IE **lorg-ah$_2$-* 'club; (wagon) shaft, thill'

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[39] In the spelling of the town Nerah, named after the serpent deity.

The Sumerian term, which can be preceded by the WOOD classifier and occurs parallel to Akk. *serdû* 'pole', appears to designate the composite upper and lower beam-sections of an ard, or sliding plough (cf. POTTS 1997: 75-76). AHw 7 suggests a meaning 'Geschirr; Joch'. IE **lorg-*, surviving only in Celtic (as an *-ah₂-* stem) and in Germanic, designates a kind of club, cudgel or pole, but note Breton *lorc'henn* 'shaft of wagon, thill'. NS **la-ra-ah** (AHw 7; CAD 1/I 65).

32. **zarah** 'grief, worry; dirge; vulva; eczema' : cf. IE **su̯orgʰ-ah₂-* 'grief, worry; illness'

There is remarkable agreement between the Sumerian and IE terms, both semantically and phonetically. The cluster *su̯* regularly corresponds to **z** in Sumerian. Here, too, the medial cluster *r* + velar has been reduced to **r**. As in the previous instances, the vowel of the initial syllable may have undergone vowel harmony, assimilating to the stressed second vowel. However, since the Mesopotamian syllabary cannot represent */o/* unambiguously, the exact nature of the first vowel cannot be ascertained. NS **za-ra-ah** (CAD 9 102; 11/II 274).

33. **emerah** 'wooden bowl' : cf. IE **h₂amh(e)-tlah₂* (coll. of **h₂amh(e)-tlom* 'vessel')

Sum. **emerah** */əmə́rah/* < */*amə́rah/* names a bowl (Akkadian *kutû*) used for storing and serving liquids (CAD 8 612). The form **emarah** cited by CIVIL (1987a: 136) and SIGRIST (2000: 286) without indication of the source may represent a metathesis of the expected predecessor */*amə́rah/*. A probable cognate can be found in Old Indic *ámatram* 'drinking vessel', which must go back to an earlier **h₂amhe-tlom*. The root is either **h₂amh-* 'pour' or **h₂amh₃-* 'grip' (LIV 237). Note that the final syllable of the Sumerian form can only derive from Euphratic **-trah₂*, indicating expansion of the latter allomorph at the expense of **-tlah₂*. NS **e-me-ra-ah** (CIVIL 1987a: 136 n. 7).

Akkadian:

elimakkum ~ *elamahhu* '(a precious wood; tree name)' : cf. **h₁el-m-ah₂-* 'elm' (see no. 1)

harmony as characteristic of native words. Most of the several dozen polysyllabic terms ending in **-in** are comparable with IE stems marked by nasal suffixes. Salonen failed to note, however, that there is variation within the group suggestive of diverse suffixation. Some terms fluctuate in their syllabic spellings between **-en** and **-in**, others between **-en/-in** and **-an/-un**, still others between **-in** and **-im**. Three subcategories of **-in** will be examined below.

Stems in *-en-*:

34. **hurin** 'eagle' : cf. IE **$h_3$or-en-m̥* (acc.) 'eagle, large bird'

This mythologically important Sumerian bird name has no unique logogram, an indicator that it was borrowed independently of the writing system and perhaps at a relatively late (post-archaic) date. It does, however, occur in Early Dynastic contexts written with the sign BALAG (CIVIL 1983: 2-4), named after the latter's primary value, a musical instrument. In Neo-Sumerian it is always written syllabically, usually in the form **hu/u$_{11}$-ri$_2$-in** (AHw 1430),[40] which is noteworthy for the choice of middle grapheme. The syllabogram **ri$_2$** can be regarded as a xenogram in a Sumerian context. It occurs in Sumerian literature almost exclusively in known or suspected loanwords and foreign names:[41] among others, in **hu-ri$_2$-in** 'eagle', **da-ri$_2$** */dari/* ~ **da-(a-)ri-a** */dario/* 'eternal' (from Old Babylonian *dāriu* 'eternal'),[42] and **Ti-ri$_2$-ga-a-an** (Tirigan, a Gutian ruler). The closest cognate to the Euphratic term in form and date is Hittite *haran-* 'eagle'.

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[40] Also written **u$_2$-ri$_2$-in** ~ **u$_2$/u$_5$-ri-in** with loss of the initial 'laryngeal'.

[41] Ascertained by conducting a thorough survey of the 'Electronic Text Corpus of Sumerian Literature', located at <www-etcsl.orient.ox.ac.uk>. Almost all of the 56 occurrences to date (including many repetitions) were found in loans from Akkadian (e.g. **da-ri$_2$**, **mi-ri$_2$-tum**, **hu-ri$_2$-zum**, **zi-ri$_2$-gum**), in Akkadian and Gutian names (e.g. **ri$_2$-mu-uš**, **šar-ka$_3$-li$_2$-šar-ri$_2$**, **ti-ri$_2$-ga-a-an**), and in probable loans from Euphratic (e.g. **hu-ri$_2$-in** 'eagle', **hi-ri$_2$-in** 'weeds; hard earth; chariot platform', **u$_3$-ri$_2$-in** 'blood').

[42] The laxing of the final vowel, in this case of */u/* to */o/*, is seen clearly in the choice of **a** and **da** graphemes for Akk. *-u*, *-tu*. This is a regular and common feature of Sumerian, one that has been consistently misunderstood in the Assyriological literature, where it is usually equated with the so-called nominalizing suffix *-a*, a redundant feature on a noun.

35. **umbin** 'wheel' : cf. IE **h_3m̥b^h-en-* 'navel; (by extension:) wheel hub, shield boss, etc.'

The NAIL/CLAW logogram is used in Sumerian to write the homographic terms for 'nail, claw' (**umbin**; cf. IE **h_3n̥g^{wh}-* 'nail, claw'), 'wheel' and 'container for animal fat'. The sign, which goes back to the earliest stage of writing, was probably borrowed together with its values from Euphratic. NS **um-bi-in** (CAD 16 244).

36. **umbin** 'container for animal fat' : cf. IE **h_3n̥g^w-en-* 'fat, salve'

The Sumerian container, attested only in Presargonic (i.e., Old Sumerian) texts, was used as a receptacle for storing pig and sheep fat (STEINKELLER 1992: 29; WILCKE 1996: 47, 55-56). The exact reading of the NAIL/CLAW logogram in this context has not yet been confirmed.

37. **erin** ~ **eren** 'cedar' : cf. IE **$h_1$elh_1-en-* ~ **h_1l̥$h_1$en-* 'cedar, juniper'

Initial *h_1* is attested in the Early Dynastic spellings **$hirin_x$** (= ŠEŠ) ~ **hu-rin** for the tree name (CIVIL 1983b: 3-4; cf. MSL 14 56). Medial *lh_1* to Sumerian **r** is regular (see next entry, and those listed above at no. 14). The grapheme used in phonetic spellings of this word for rhotic + vowel can be read **ri** or **re**. OS **$hirin_x$** ~ **hu-rin** > NS **e-ri-in** ~ **e-re-en** ~ **e-ri-na** / **e-re-na** (CAD 4 274; SLOBA 184).

The laryngeal *h_1* has left other traces in Sumerian: the initial cluster *h_1r* may result in an alternation of **h** and **r**, as in **huš** ~ **ruš** 'red' (cf. IE **$h_1$rud^h-to-* 'red' in Latin *russus* 'red'), borrowed into Akkadian as *ruššû* 'having a reddish sheen' (CAD 14 427). NS **hu-uš** ~ **ru-uš** (SLOBA 334).

38. **erin** ~ **eren** '(value of logogram depicting mammal)' : cf. IE **$h_1$elh_1-en-* '(young) red deer'

The archaic logogram classified as ZATU 145 (see GREEN and NISSEN 1987: 200) and read in 3rd-millennium Sumerian as **erin** ~ **eren** is a depiction of the head and neck of an unidentified quadruped. In Sumerian, however, the sign is used to write the name of a tree, the cedar, not an animal. It would appear that in Uruk IV the homophonous words for 'cedar' and 'red deer' were both written with the same sign.

lowed by WAETZOLDT (1972: 6) the reading **udu-uli-gir$_x$** for this category of sheep. Pointing to the phonetic spelling **me-gir$_{15}$** of Sargonic texts, STEINKELLER (1995b: 64 n. 30) has now demonstrated the validity of the reading **eme-gir$_{x/15}$**, but admits that the gloss **u$_2$-li** "remains a mystery". A solution might lie in seeing **udu-uli-gir$_x$** as an alternate term for the same category of sheep. For **uli** IE **hul̥h$_1$-i-* or **hulh$_1$-i-* 'wool', seen in Hittite *huliyas* 'wool', comes to mind (cf. HED 3 369). If correct, the term would then mean 'native-wool sheep', in contrast to sheep bred primarily for their meat or hides, such as the **udu-aslum$_x$** 'long-fleeced sheep' (WAETZOLDT 1972: 8; STEINKELLER 1995b: 52) and to foreign or mountain sheep, **udu-kur-ra**. The **udu(-eme)-gir$_{x/15}$** yielded **siki-gir$_{x/15}$** 'native wool' (STEINKELLER 1995b: 57), and it is this latter term that is probably to be equated semantically with **uli-gir$_{x/15}$**. This is bolstered by the fact that the term **udu-eme-gir$_x$** 'was never used at Umma to denote the animal itself – the simple word **udu** "sheep" was in [sic] used for this purpose – but rather in reference to its wool' (STEPIEN 1996: 21). NS **u$_2$-li** (MSL 16 218).

41. **e-rin$_4$** ~ **e-ri$_2$-na** 'root' : cf. IE **ur̥(h$_2$)d-no-* 'root'

Sum. **e-ri$_2$-na** */ərə́no/* is another example of the use of the syllabogram **ri$_2$** (also read **re$_2$**, **ru$_9$**) in a term of foreign origin. The logographic value of the same sign is **i-ri** ~ **uru** */ərə/* 'city' (cf. STEINKELLER 1995a: 542, whose */ürü/*, equivalent to my */ərə/*, is considered reasonable by RUBIO 1999: 7 n. 13; WHITTAKER 1998), which suggests that **ri$_2$** is the sign of choice for rendering */rə/*. CIVIL (1960: 72; 1961: 125-126) has discussed this term in detail and drawn attention to a probable variant, **a-ri$_2$-na** (cf. the review of the evidence in PSD 1/I 156). Note also Akk. *erēnu* 'root', a loan from Sumerian (CAD 4 279). The Sumerian term appears to derive from dialectal **ur̥d-no-* (as in Old Irish *frēn*), rather than from general IE **ur̥h$_2$d-no-*, given the fact that the sequence *rd/r̥d* reduces to **r** in Sumerian. NS **e-ri-in** ~ **e-ri$_2$-na** ~ **i$_3$-ri$_2$-na** ~ **a-ri$_9$-na** (CIVIL 1961: 125-126).

ulušin 'emmer beer' : cf. IE **h$_2$alu-s-no-* 's.t. bewitching; (by extension:) intoxicating' (see no. 17)

Discussed above in section on brewing.

apin 'plough' : cf. IE **uog^{wh}-ni-* 'ploughshare' (no. 12)

See section on agriculture (above).

Stems in *-ti-* + inflectional suffix *-m* (acc.) develop parallel to stems with final *t* + *-i-m*:

karadin 'stack of sheaves' : cf. IE *kr̥h_2t-i-m 'wickerwork' (no. 15)

Not a *-ti-* stem, but phonetically comparable. See section on agriculture.

42. **ulutim** ~ **ulutin** 'written notice, confirmation of intentions' : cf. IE *u̯l̥h_1-ti-m 'wish(es), will'

The legal term **ulutim** /ələ́tim/ refers to "a formal notice given to a person under obligation to pay or deliver, with the implication that the person is therewith given a reasonable or customary delay to meet his obligation in due time" (CAD 7 310).[44] FALKENSTEIN (1965: 105) reconstructs a pre-form ***ulkutin** on the basis of ES **ilkiden**.[45] The Emesal cognate is conservative in its retention of a reflex of the original laryngeal. Of the three laryngeal phonemes usually reconstructed for Indo-European, h_1 is least in evidence in the loan corpus. Indeed, it is exceedingly rare, leaving traces primarily in its effect on neighbouring phonemes (see, for example, nos. 14, 37 and 38). Here, however, the reflex of the laryngeal shifted in Old Sumerian from a velar fricative to a velar stop in the environment of *t*, instead of merging with the lateral as *r*. The velar stop was subsequently lost in Emegir on the analogy of **ulutim$_2$**, though retained in Emesal. The IE verbal root is *u̯elh_1- 'wish; choose, select' (LIV 618-619). NS (EG) **lu-ti-im** (in **ki-lu-ti-im** for the compound **ki-ulutim**) ~ **u$_2$-lu-tin** ~ (ES) **il$_2$-ki-de$_3$-en** (AHW 406; CAD 7 309; SCHRETTER 1990: 196).

Of further interest in this legal area is the term **ur$_5$-ra** 'obligation; debt (with interest)', directly comparable with IE *ur̥h_1-trah_2-m (acc.) 'agreement' (for which see OLSEN 1988: 32). The

[44] Early but detailed reviews of the semantics can be consulted in LANDSBERGER (1954: 113-114 n. 228; 1964-1966: 62-79). See also FALKENSTEIN (1959: 74).

[45] On this see also BERGMANN (1964: 22).

phonetic development of *tr* is regular, as we have seen in a number of instances above. NS **ur$_5$-ra** > **ur** ~ **u$_2$-ur** (CAD 6 217).

43. **ulutim$_2$** ~ **ulutin$_2$** 'appearance, facial features' : cf. IE **ul̥-ti-m* 'appearance, form'

The attested IE verbal noun deriving from **uel-* 'see, perceive' (LIV 616-617) is actually **ul̥-tu-* 'appearance, form, facial expression' rather than **ul̥-ti-*, but there is much fluctuation in the occurrence of the semantically parallel suffixes *-ti-* and *-tu-* across the dialects. NS **u$_2$-lu-tim** (CAD 11/I 27).

44. **uktin** 'appearance, likeness, facial features' : cf. IE **h$_3$k^w-ti-m* 'appearance, expression, sight'

This term is written with the same logogram as the preceding and is equivalent in meaning. NS **uk-tin** (CAD 2 317).

45. **idin** 'wine; grapevine' : cf. IE **uih$_1$-ti-m* 'vine'

The Sumerian term for 'wine; grapevine' occurs as a rule compounded with **g̃eš** (ES **mu**) 'wood; woody' in the form **g̃eštin** (**ge-eš-tin**; ES **mu-ti-in** in SCHRETTER 1990: 236). NS **i-di-in** > **di-in** ~ **ti-in** (MSL 14 39; SLOBA 343; CAD 8 202).

Adjectives in *-*ú*-

A series of bisyllabic but monomorphemic adjectives in Sumerian, an anomaly in the structure of the language, shares a final syllable in **ud** /*ur̥*/. Almost all of these are dimensional adjectives.[46] There is a close correspondence between such terms and a number of Indo-European adjectives in **-ú-s*. The semantics have undergone a shift in part, but have a consistent pattern of relationship to their IE counterparts.

While most such adjectives end in **ud**, there are exceptions. One key example is **idim** /*ədə́mo*/ 'heavy; important; (by extension:) underground water, spring; simpleton, simple person' (cf. IE **n̥-d^h-*

[46] The category of dimensional adjectives is discussed in BALKE (2002), although without reference to the bisyllabic terms. These terms occur both as adjectives and as stative verbs.

m̥hó- 'lowest'). NS **i-dim$_2$** ~ **e-dim$_2$** (CAD 8 25; 11/I 108-109; 15 80).

Exactly parallel in form[47] to the preceding is the noun **itima** ~ **utima** */ətə́mo/* 'cella; bedchamber; darkness' (cf. IE **n̥t-m̥hó-* 'innermost; most intimate'). NS **i-ti-ma** ~ **u$_2$-ti-ma** (MSL 14 41, 310, 314; FLÜCKIGER-HAWKER 1999: 102; CAD 4 413; 8 443).

The following examples illustrate the category of adjective in **-ú-* + nominative suffix *-s* (preserved as a flap [ɾ] written **d/r**):

46. **sukud** 'tall, high; (by extension:) exalted, proud' : cf. IE **sunk-ú-s* 'heavy; sluggish'

This term lacks any trace of the IE nasal, perhaps in part due to the infrequency of syllabic spellings of the word and in part to the lack of a consistent scribal convention for the representation of Sumerian */nk/* (as we see, for example, in the spellings **u-ku** ~ **u$_2$-ug** ~ **un** for unattested **unk(u)** 'community, people'). NS **su-ku-ud** (MSL 14 59; CAD 4 110).

47. .**lugud$_2$** > **gud$_8$** 'short; poor, destitute' : cf. IE *$*h_1l\c{n}g^{wh}$-ú-s* 'light; slight; nimble'

Probably */ləkúɾ/*. The semantics of **sukud** and **lugud** are opposites like their IE counterparts, which, however, relate to the dimensions of weight and speed rather than height and status. See also the discussion under **gu-ru$_{12}$-d** below. NS **lu-gu-ud** ~ **lu-ku-ud** > **gud** ~ **kud** (CIVIL 1982: 10; CAD 8 308, 569; 9 94).

48. **dugud** ~ **tukur** 'heavy, dense; important' : cf. IE *$*t\c{m}g^h$-ú-s* 'heavy'

Probably */təkúɾ/*, judging from the spelling **(-a)d/t-gu-ud** cited at SLOBA 151. NS **du-gu-ud** ~ **du-ku-ud** ~ **tu-kur** (SLOBA 151; CAD 8 24-25).

49. **gu-ru$_{12}$-d** > **gur$_4$** 'heavy, thick; poor, destitute' : cf. IE *$*g^w\c{r}h_2$-ú-s* 'heavy'

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[47] One could also mention parallel examples with **-mo-*, such as **kilim$_2$** 'reed bundle' (cf. IE *$*k'\c{l}h_2$-mo-* 'straw, reed') and **dilim$_2$** 'spoon; scales dish; seed bowl; oar blade' (cf. IE *$*d^h\c{l}h_2$-mo-* 'recess, hollow'). NS **ki-li-im** > **ki-li** (CAD 8 357; SLOBA 395); **di-li-im** > **di-li** > **de-el** (CAD 7 300).

ku and its meaning 'very sweet, honey-sweet' suggest, however, that the latter represents a reduplication: */*d'ukúr-d'ukúr/* > */kukku(r)/*. NS **du-gu**$_2$ ~ **ku-gu**$_2$ ~ **ku-uk-ku** ~ **ku**$_7$**-ku**$_7$**-d** > **du-ug** ~ **du-k(a)** > **du**$_{10}$ ~ **du-u**$_2$ (MSL 14 46; SLOBA 147; AHw 1377; CAD 3 120, 200; 10/I 413).

Conclusions

The Mesopotamian lexical lists and literature of the 3rd and 2nd millennia B.C. provide us with a wealth of data that shed light on the linguistic contacts of the early 3rd millennium. These data point not only to the strong interchange between Sumerian and Akkadian speech communities in early historical times, but also to the presence of other groups, such as the Hurrians, that left traces in the lexica of the two languages.

A number of polysyllabic terms (mostly nouns and adjectives) preserved in the Sumerian lexicon and attested in Sumerian texts of all periods indicate, moreover, the presence of a hitherto unidentified Indo-European community, which I have dubbed the Euphrateans, which was already settled in the Mesopotamian area between 3200 and 2500 B.C. at the latest. Before the language of this community, Euphratic, ceased to be spoken, it left a series of technical terms in Sumerian and, to a lesser extent, in Akkadian, that attest to the nature of this contact. Their polysyllabic nature and oft complex structure, which have been difficult to fit into the usual Sumerian mould, have led Assyriologists to suspect them as foreign borrowings (e.g. CIVIL 1964, 1996), and from a population already established in Mesopotamia at the time of Sumerian settlement (e.g. LANDSBERGER 1944; OPPENHEIM 1964: 33-34, 49-50; SALONEN 1968; Hallo in HALLO and SIMPSON 1971: 17-19).

From an analysis of these terms it is possible to reconstruct portions of the phonology (e.g. reflexes of all three laryngeals) and of the morphology of Euphratic, including key aspects of the gender (masculine, feminine, neuter) and case systems (at least nominative and accusative singular, instrumental plural). Dialect features and other anomalies cropping up in these terms provide useful clues as to the position of Euphratic within the Indo-European family (namely, western). Administrative tablets from Uruk IV, perhaps the earliest written records known, attest to the language (for a sample text see WHITTAKER 2001: 39-40), but in rudimentary form, given the limit-

ed phoneticism of this early period. Still lacking, however, is a body of identifiable texts written in a combination of logographic and syllabic signs from the period of historical Sumerian, a deficit which limits the amount of knowledge available to us concerning the structure of Euphratic. Nevertheless, it should not be forgotten that a mere century ago Tocharian, another 'western' language in Asia, was still not known to have existed, nor were the extensive Hittite archives recognized as a resource for Indo-European studies. It is just a matter of time, patience and knowing where to look.

Abbreviations

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Indo-European Word Formation

Proceedings of the Conference
held at the University of Copehagen
October 20th - 22nd 2000

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and Birgit Anette Olsen

This book contains twenty articles on the subject of derivational morphology in Indo-European languages, and is the result of the conference "Indo-European Word Formation", held in Copenhagen, October 20th - 22nd 2000.
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